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VOL. 87 NO. 1

textile bulletin

JANUARY • 1961

1960 Cotton:
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BPA NBP

Production & Quality

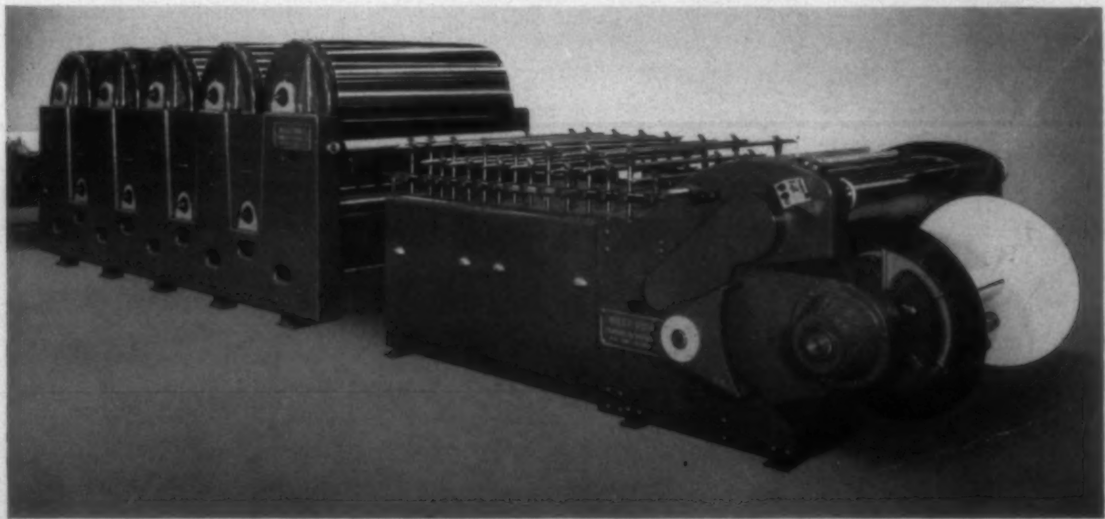
two big reasons for buying the Pacesetter Slasher!

PRODUCTION: West Point's PACESETTER Slasher is regularly achieving drying rates of over 1,600 pounds per hour (dry unsized weight) on 9-cylinders and over 2,000 pounds on 11-cylinders. Operating speeds of 90 to 150 yards per minute are common while 175 and over 200 yards are known in special cases. Excellent warps are made whether you slash canvas, print cloth, satin or suiting materials.

QUALITY: The PACESETTER is built to last with massive cast iron frame, extra heavy-duty journals and sprockets (or V-belt drive optional). Patented wide-open design and convenient lift-out panels for superior access to warp, plus covered steam and condensate manifolds for safety and ease-of-cleaning are additional *top quality* features of the PACESETTER Slasher.

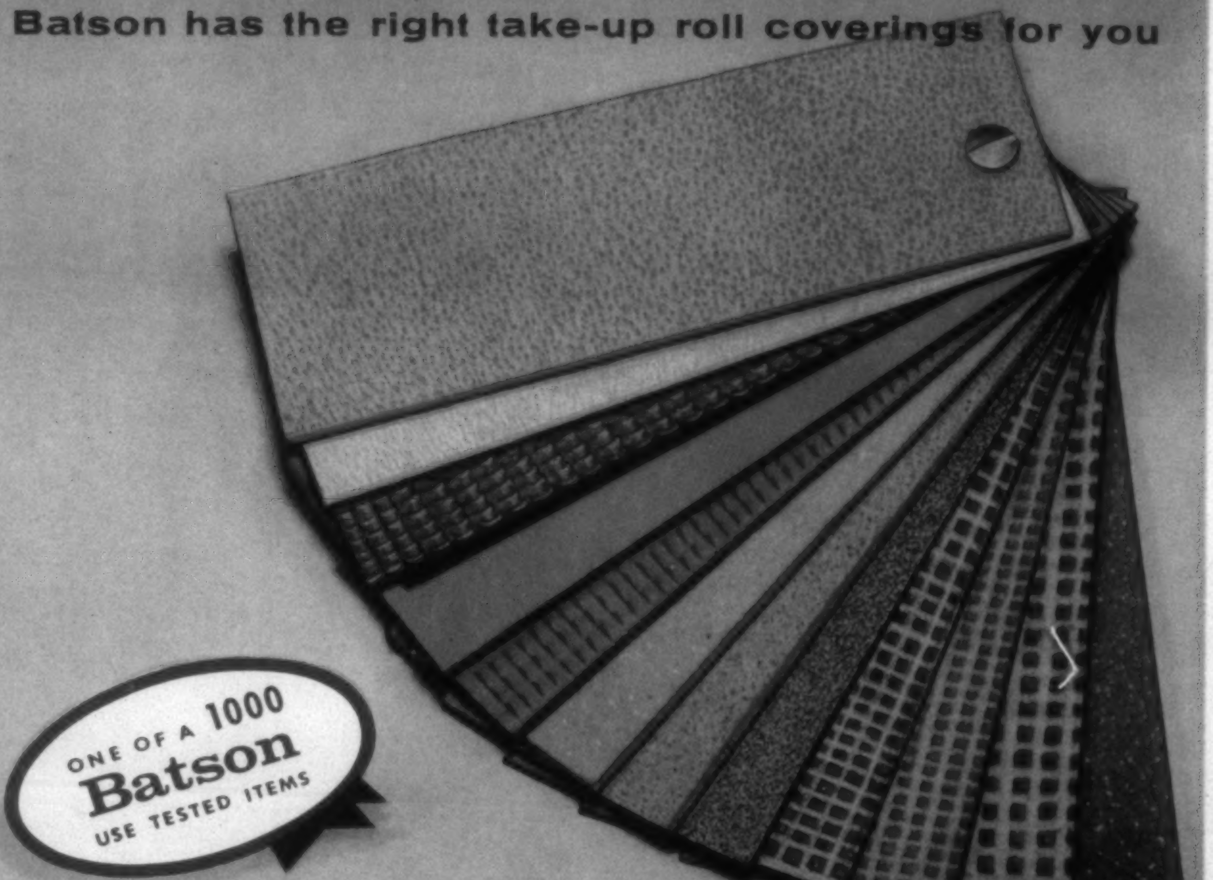
Any way you look at it—it's worth while to get more information on West Point's PACESETTER Slasher. Ask us or ask your neighbor who runs one.

West Point
Foundry & Machine Co
WEST POINT, GEORGIA



Changing styles or regular run . . .

Batson has the right take-up roll coverings for you



For grease-free, slip-free, even-rolling cloth
BATSON IS YOUR ONE
SOURCE FOR ALL YOUR
TAKE UP ROLL COVERINGS

Because Batson has the widest assortment of use-tested take-up roll coverings . . . because Batson's fast delivery and proved service means your roll coverings are on the spot when you need them, ready for easy application . . . and all your Batson take-up roll coverings are long-wearing, resilient . . . they hold, yet treat your finest fabrics tenderly. Make Batson your prime source, your *one* source for take-up roll coverings for weave room, finishing plant or cloth room.

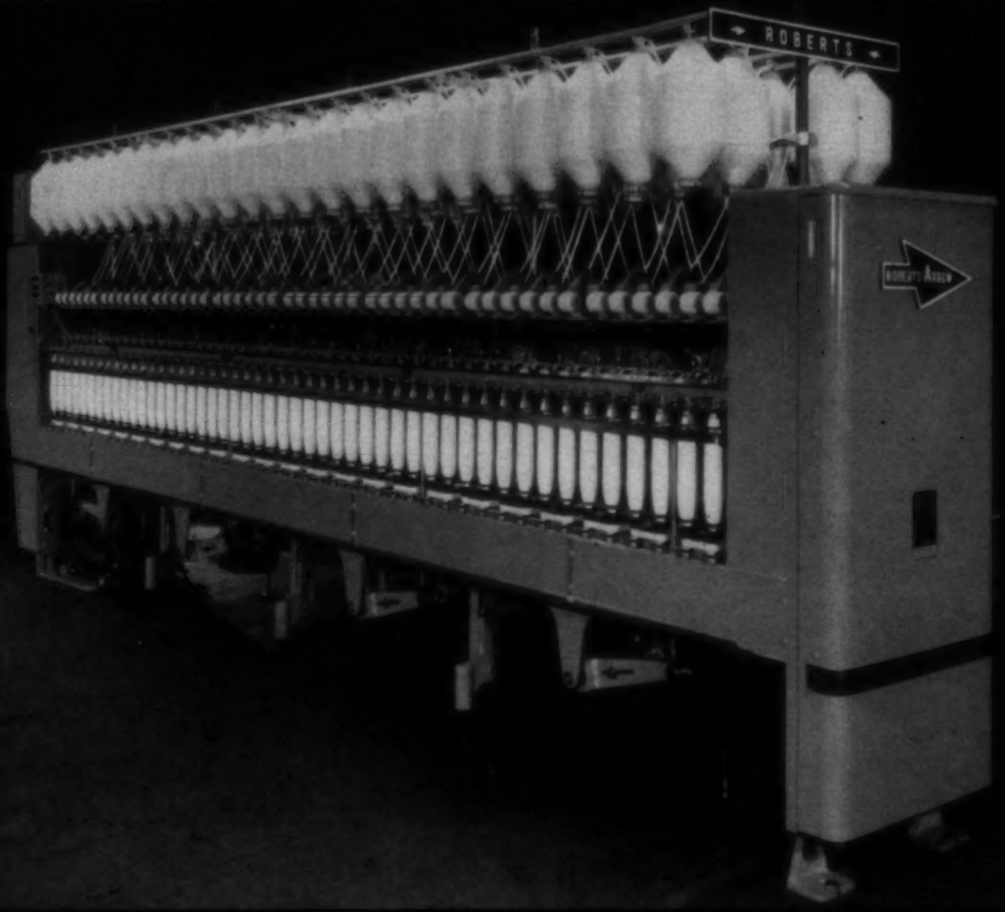
THE 'P' IS FOR PRONTO!

Louis P. Batson Company

SALES AGENTS, WHOLESALE DISTRIBUTORS & MANUFACTURERS

Box 3978 • Park Place • Greenville, S.C.

ROBERTS ARROW SPINNING



Versatility For All Yarn Counts!

Arrow Spinning Frames are available to run all yarn counts from 2's to 120's. More than 1000 Arrow Frames are in service at large and small mill organizations in the U. S. A.

Several examples are provided at the right which demonstrate the versatility of Arrow Spinning.

The newly refined Arrow offers greatest value in high speed operation, bigger packages, dependable performance, low initial cost, and maintenance-free operation. Arrow Spinning is available for both cotton and worsted systems.

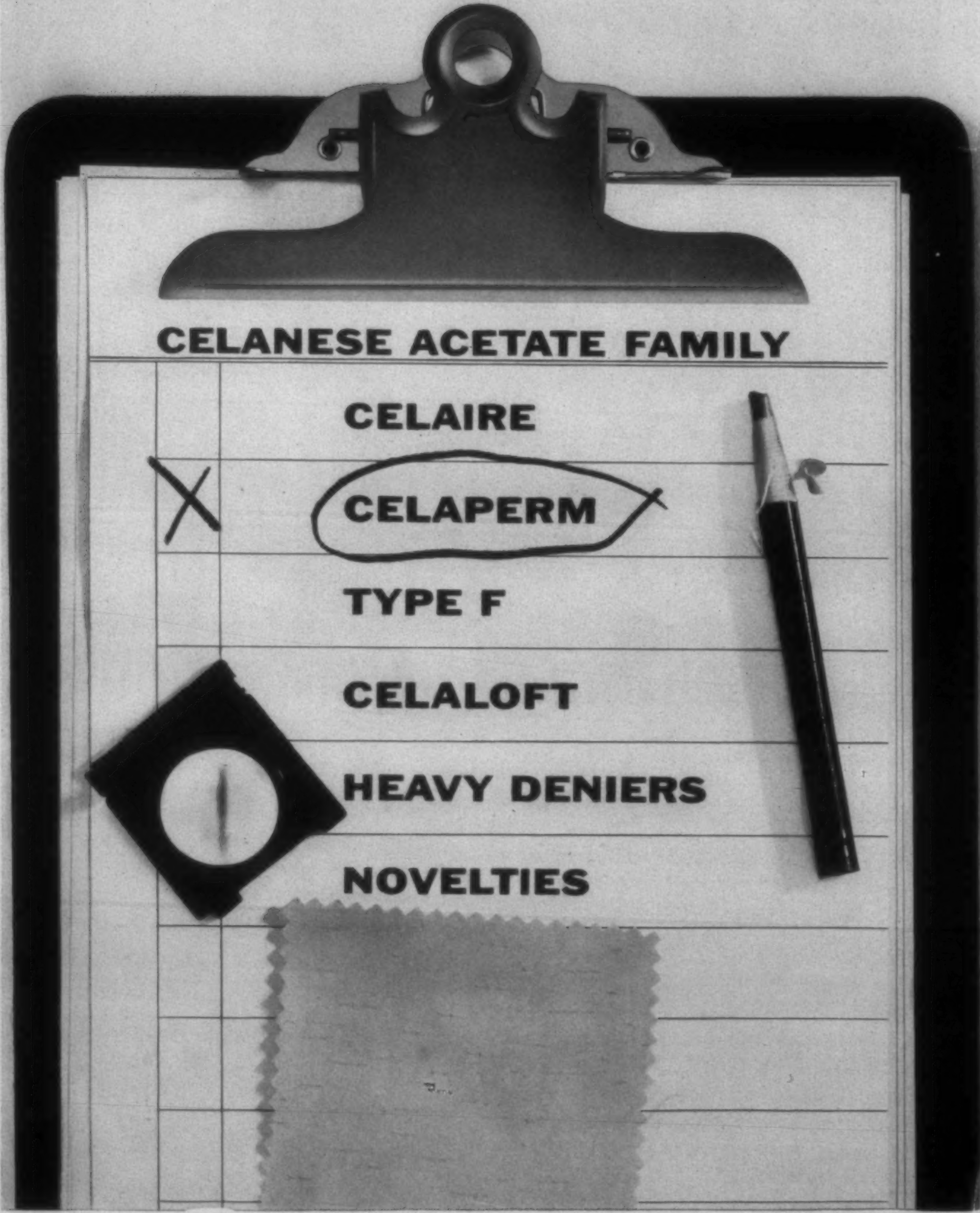
Roberts Technical Service backs up every Roberts installation with intelligent understanding of the mill's requirements and ambitions.

THREE MILLS RUNNING ARROW FRAMES ON A WIDE RANGE OF YARN NUMBERS

- An independent producer of Osnaburgs and Corduroys runs 62 Arrow Frames with 20,000 spindles making 3.25's to 8.25's warp spun filling yarn on 3" rings and 12" bobbins; 8's to 21's warp yarn on 3" and 2½" rings and 12" bobbins; and 14.5's to 22.5's direct spun filling yarn on 1-9/16" rings and 8¾" quills.
- A major mill group uses 50 Arrow Frames with 16,000 spindles to produce 80's to 100's combed long fiber cotton yarn for fine broadcloths on 1¾" rings and 10" bobbins.
- A small carded knitting yarn mill uses 20 Arrow Frames with 5040 spindles to run 26's yarn on 2¼" rings and 11" bobbins.

ROBERTS COMPANY
SANFORD, NORTH CAROLINA

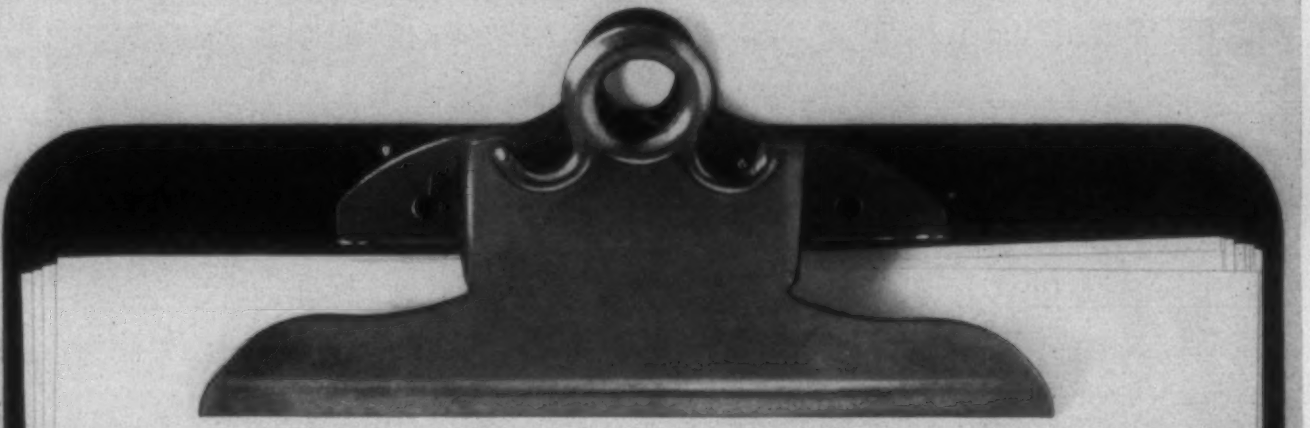
ACETATE...one



CELANESE ACETATE FAMILY

CELAIRE
[✓ CELAPERM]
TYPE F
CELALOFT
HEAVY DENIERS
NOVELTIES

# of today's most versatile fibers



CELAPERM acetate with "sealed-in" color is another important member of the Celanese acetate family. This solution-dyed yarn with unsurpassed fade resistance serves a remarkable range of end uses. The filament yarn is available in a long line of wanted deniers and fashion colors for curtain, drapery and upholstery fabrics. And for apparel in circular knits, tricots and wovens.

Bulked filament Celaperm adds a new lofted look to home furnishings and upholstery fabrics. In apparel constructions it provides a crisp, rich, worsted-like hand.

Celaperm has a great potential for new constructions and Celanese is always ready to work with you on them. Celanese Fibers Company, Box 1414, Charlotte 1, N. C.

Celanese® Celaire® Celaloft® Celaperm® Type F T.M.

Celanese Fibers Company is a division of Celanese Corporation of America.

Acetate...a Celanese contemporary fiber

DISTRICT SALES OFFICES: 180 Madison Avenue, New York 16, N. Y.; 15 N. Broadway, Des Plaines, Ill.; Western Merchandise Mart, Room 478, San Francisco, Calif.; P. O. Box 1414, Charlotte 1, N.C.; 200 Boylston St., Chestnut Hill 67, Mass.; 3130 Maple Drive, N.E., Atlanta 5, Ga.

EXPORT SALES: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Ave., New York 16.

IN CANADA: Chemcell Fibers Limited, 1600 Dorchester Street West, Montreal, Quebec

You get additional operating profits with Built-in Economy Features

of BAHNSON COLLECTO-VAC

You can plan for additional operating profits with the extra quality design features of Bahnson's Collecto-Vac for collecting broken ends, lint and fly. Its anodized aluminum flutes neither crack nor warp, thus eliminating replacement costs . . . its rugged all-steel collection box provides durable service indefinitely . . . its scroll type fan gives maximum air handling, helps air distribution in the room by dispersing motor alley heat . . . it has quick, easy access for maintenance.

Collecto-Vac's superior construction enables it to reduce ends down more efficiently, to minimize slubs and gouts, to keep frames and room cleaner. Ask any mill man who has Bahnson Collecto-Vac. Fill in the coupon below for free informative bulletin.

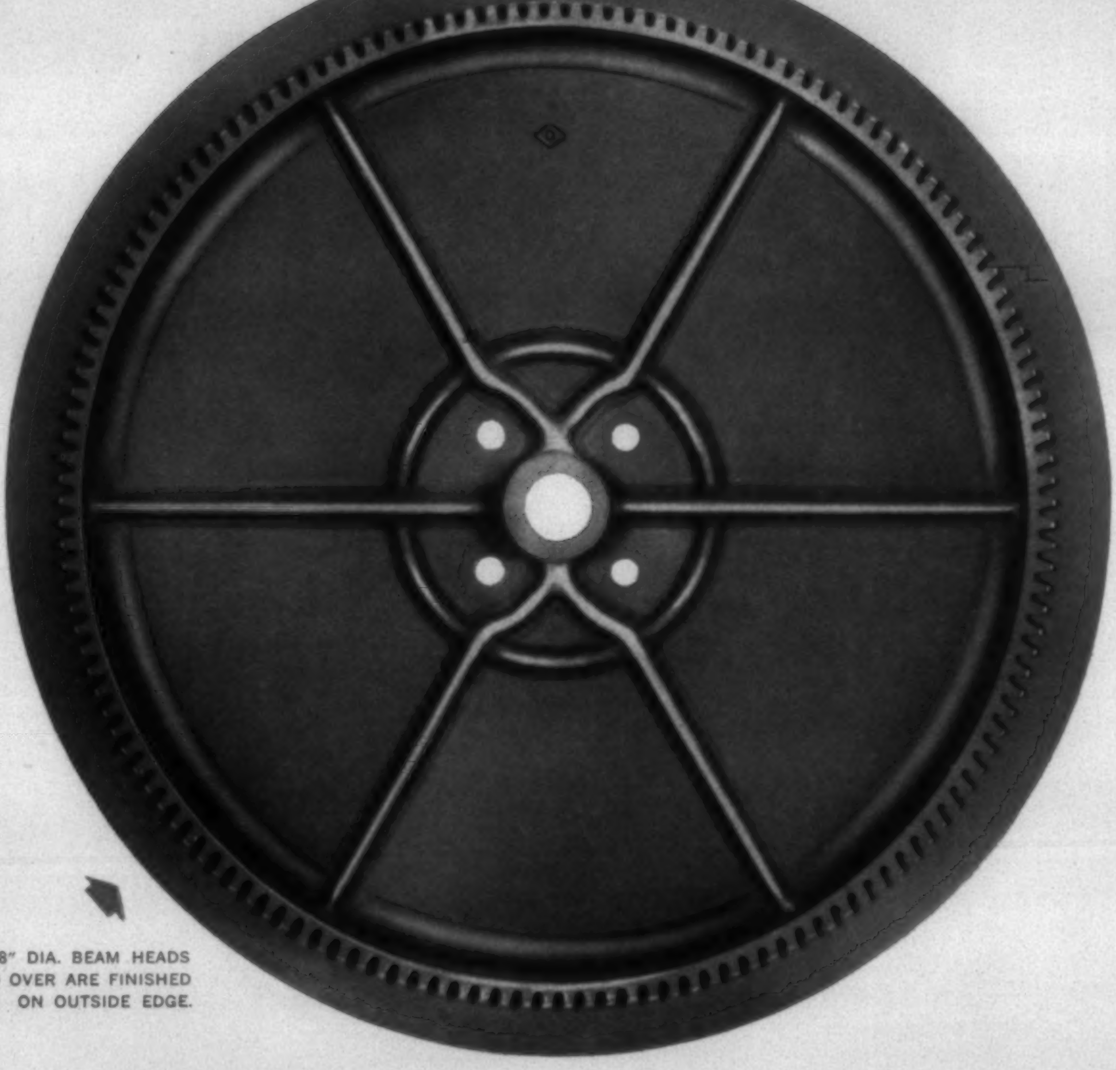
Clip coupon to letterhead. Mail today for Free Illustrated Bulletin 30A.

Name____________________________

Bahnson

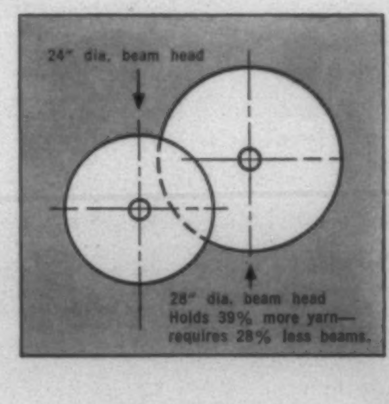
AIR-O-MATION

THE BAHNSON COMPANY • WINSTON-SALEM, N. C.



28" DIA. BEAM HEADS
AND OVER ARE FINISHED
ON OUTSIDE EDGE.

GREATER MILL SAVINGS POSSIBLE WITH LARGER LOOM BEAM HEADS



Insure these savings by specifying Draper Beam Heads. Made from laboratory-controlled materials, with accurate foundry casting and precision machining, top quality Draper Beam Heads protect your changeover investment. Your Draper representative will be glad to investigate the savings you can realize through replacing with larger beam heads.

DRAPER CORPORATION

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NEW ... and better than ever!

WHITIN EVEN-DRAFT* DRAWING

*REGISTERED TRADE MARK

Several short years ago, the first Whitin EVEN-DRAFT Drawing revolutionized the industry's concept of what "high-speed" drawing should really be. It was outstanding then. It is even more outstanding now.

The tremendous productive capacity, high speed, strong, rugged chassis and liberal use of antifriction bearings were all impressive, but the unique vacuum roll cleaning system pioneered by Whitin (and Pneumafil Corporation) really broke the technical barrier to successful and practical high-speed drawing.

Acceptance was quick and widespread, both here and abroad. Now nearly 6,000 "high-speed" deliveries are in operation in an impressive list of leading mills.

The drawing process has been highlighted by rapid and dramatic changes. So too, has the EVEN-DRAFT. Today its speeds double those of the orginal. The greatly improved vacuum cleaning system, is not only flexible and requires no adjustment, but has been expanded to cover the trumpet area. Other new features include: V-belt coiler gear drive, 18" x 42" cans, more antifriction bearings and supplementary stop motions.

With EVEN-DRAFT's proven industry-wide acceptance, tested mill performance and increased productive capacity, it is today's most wanted Drawing because today — Whitin EVEN-DRAFT is better than ever!

For complete information ask your Whitin representative, or write direct to us.

WHITIN MACHINE WORKS

WHITINSVILLE • MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

NEW RESEARCH FACILITIES...

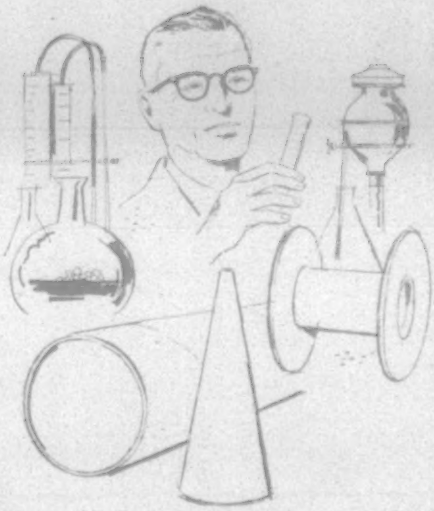
to better serve the textile industry!

On Friday, November 11, 1960, Sonoco dedicated its new Research Laboratories Building which provides the industry with the *largest, most complete* laboratory in the field of paper textile carriers.

The building was dedicated in memory of Dr. J. E. Mills, Sonoco's first Chief Chemist and Research Director. It is a fitting tribute to a man who pioneered research in special lacquers, resins, coatings, adhesives and specialty papers for textile cones and tubes.

With new and enlarged experimental and research facilities, Sonoco's "problem-solvers" are in the best position ever to render technical service on customer problems, an added benefit when you buy from Sonoco.

This laboratory expansion typifies the leadership maintained by Sonoco for over 60 years. Continuous research and product development plus integrated manufacturing plants assure Sonoco customers of products which are "standard of the world"—*you can continue to depend on Sonoco.*



SONOCO

Products for Textiles

SONOCO PRODUCTS COMPANY, HARTSVILLE, SOUTH CAROLINA • Mystic, Conn. • Akron, Ind. • Lowell, Mass. • Holyoke, Mass. • Phillipsburg, N. J. • Longview, Texas • Philadelphia, Pa. • La Puente, Calif. • Fremont, Calif. • Atlanta, Ga. • Richmond, Va. • Brantford, Ontario • Granby, Quebec • Mexico City

1731

The new Dayco duo of cots. Above, the all-purpose X-35 suggested for back-line use. Below it, the Dayco all-purpose X-98, ideal for front-line use. Both represent new compounding approaches. Note special surface detail of the X-98, as shown by microphoto inset . . . the answer to the need for absolute fiber control.

Dayco Presents Two All New, All Purpose Cots The X35 and X98

New ingredients and special surface give positive yarn control with every fibre—natural, synthetic or blend.

Dayco proudly presents another record-breaking achievement—an outstanding pair of all new, all-purpose cots, the X-35 and the X-98. Compounded with elements never used in cots before, they represent the first major improvement in cot performance offered in many years.

Ideal when used in combination, with the X-35 on the back line and the X-98 on the front, these cots are *all-purpose* in the fullest sense. Both handle any fiber . . . yarn of any size from 3's to 140's . . . on any type of system . . . with greater yarn uniformity and greater efficiency of operation. Even on Dacron and other difficult blends, the X-35 and X-98 show outstanding drafting results.

AN ENTIRELY NEW ELEMENT

The new Dayco X-35 is truly a revolution in cot engineering. Because it is compounded with an entirely new element, its heavy duty surface assures positive grip, breaks up surface tensions on all fibers.

The new Dayco X-98, front-line companion to the X-35, introduces a completely new surface formulation to the textile industry. On the finest or coarsest yarns the Dayco X-98 is a superior performer.

The Dayco X-35 and X-98 have undergone over 12 months of thorough testing under the toughest mill conditions on all types of systems and fibers.

MILL TESTS PROVE SUPERIORITY

Results prove that these new Dayco Cots are top performers. Static problems so common with synthetics are reduced to a new low. Coefficients of friction of the X-35 and X-98 prove ideal for any drafting task. Their lack of affinity for all fibers produces cleaner spinning with less fiber left on the clearers.

Whatever your drafting requirements or equipment, test run the all-purpose Dayco duo—the X-35 and X-98. You can expect to set new high standards in your yarn production, regardless of the fiber.

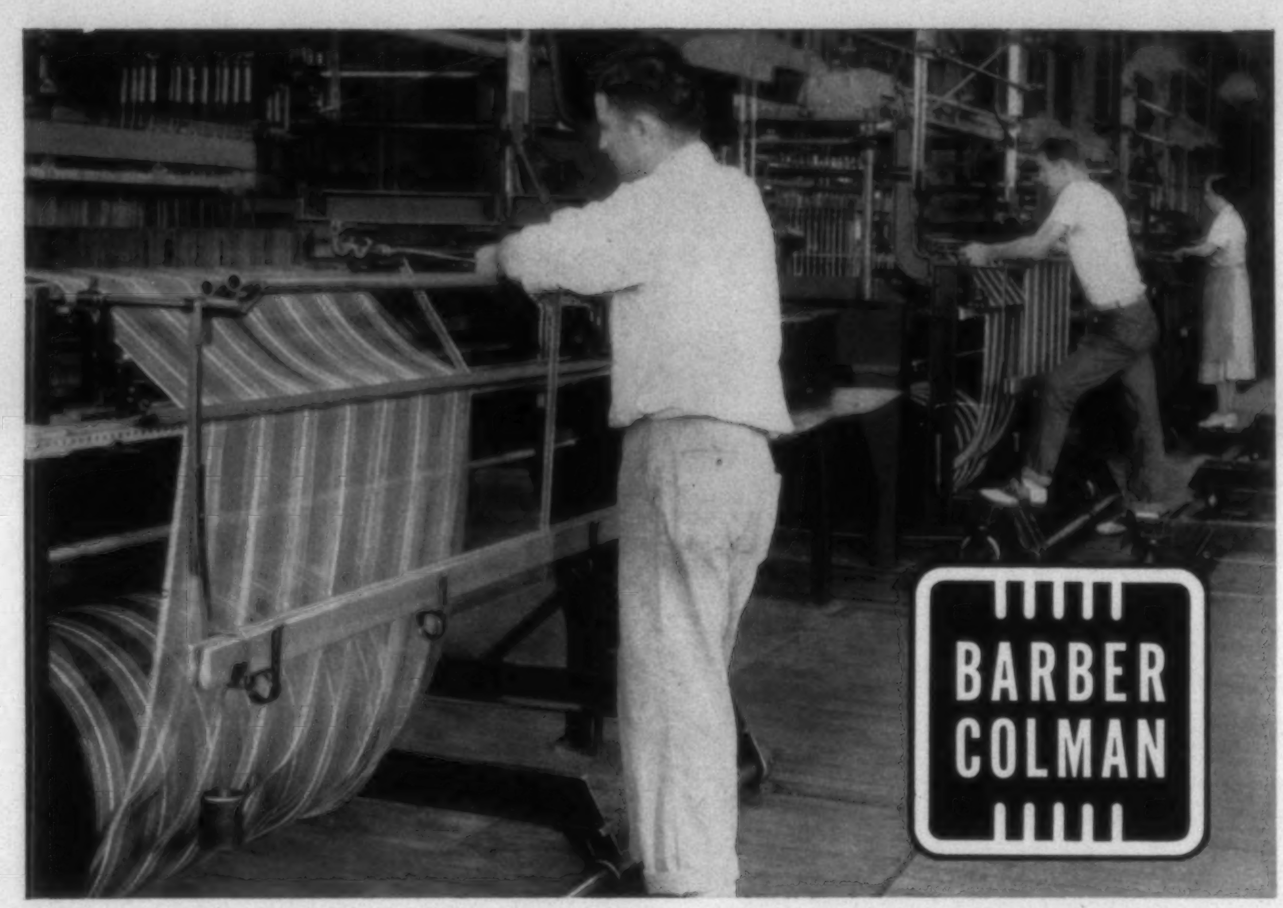
TRY THE ALL-PURPOSE TEAM

Go Dayco all the way—team up the new advanced Dayco X7 *all-purpose* apron with these revolutionary new *all-purpose* Dayco cots and expect superior drafting performance. You'll get it!

Ask your Dayco Representative to set up a trial installation. Phone or write Dayco Textile Products Co., 401 South Carolina Bank Building, Greenville, S. C. Overseas plant: The Dayton Rubber Co. Ltd., Dundee Scotland.

Dayco
TEXTILE PRODUCTS CO.
Dayco

Divison of Dayco Corporation



WARP DRAWING MACHINES HELP YOU KEEP AHEAD WITH FAST PATTERN CHANGES

Mills which are running fancy patterns, special weaves, short-order exclusives, or novelties are often bogged down waiting on drawing-in of new warps. The use of Barber-Colman Warp Drawing Machines can greatly relieve such situations because of the ease and rapidity with which new patterns can be drawn. Operating at speeds (depending on conditions) of from 2,000 to 5,000 ends per hour, these machines will draw cotton, worsted, wool, or filament and spun synthetics for plain or dobby weaves from a flat sheet, split sheet, double beam, or one-and-one leased warp. Correct selection of drop wire, heddle, and reed dent for each end is accurately controlled by a metal pattern strip punched in accordance with the designer's draft. Machines are made in several sizes with capacities up to 26 harness frames and 8 banks of drop wires. *For details, see your Barber-Colman representative . . .*

JUST WHAT YOU NEED FOR A FAST DRAW!

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

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Union Underwear reduces costs... maintains quality

with Solvay
Activated Hydrogen Peroxide
Bleaching Process

Over the past nine years Union Underwear Co., Inc.—licensed manufacturers of "Fruit-of-the-Loom" brand underwear—has maintained their quality standard without increasing prices. An important factor in this improved manufacturing efficiency was their adoption of the *Solvay Activated Hydrogen Peroxide Bleaching Process.*

The Solvay Activated Hydrogen Peroxide Bleaching Process is a new method for bleaching cotton developed by Allied Chemical Corporation and available under a royalty-free license. This new process can give you whites equal to your present process with an important decrease in costs . . . consumption of hydrogen peroxide and additives can be reduced 25 to 50% depending on purity of cotton before bleaching. Or, you can achieve whiter whites at no increase in cost.

Solvay can provide technical service to help you evaluate this new process for your plant. A booklet is available from Solvay which describes application, advantages, cost analysis and comparative quality . . . full details on the techniques and results you can expect. Write today for your free copy of "Solvay Activated Hydrogen Peroxide Bleaching Process for Cotton."

SOLVAY® CHEMICALS FOR TEXTILES

Caustic Soda • Chlorine • Hydrogen Peroxide • Sodium Nitrite
Soda Ash • Mutual® Chromium Chemicals • Potassium Carbonate

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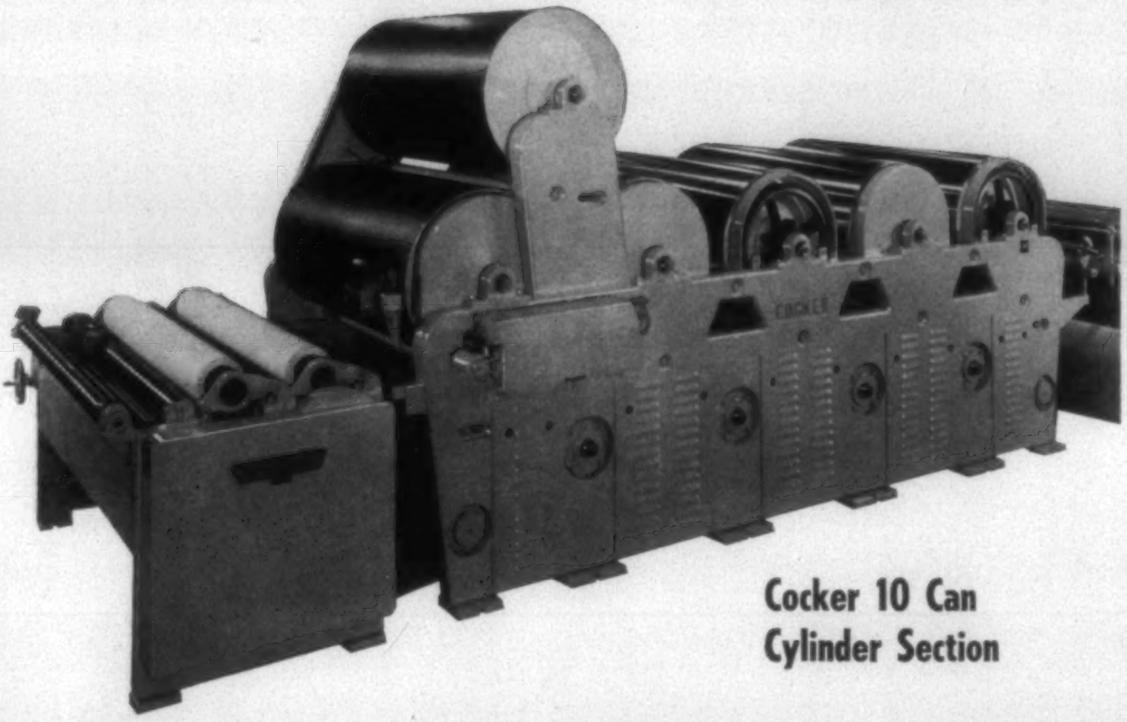
The Extras are FREE



Cocker 10 Can Cylinder Section

Prices of Cocker Cylinder Sections are in line with those of other makes, so Cocker's many valuable extra features actually cost you nothing. Here are a few.

Extra Convenience

Any cylinder can be removed individually . . . bottom cans may be taken out without first removing the top ones. All cylinders are interchangeable. Snap-out venting panels and light metal sprocket guards can be easily removed by one man. Jack foot screws permit easy adjustments. Low silhouette permits any man of normal height to watch the warp on standard top cans without using a climbing platform.

Extra Equipment

All piping and all necessary steam equipment is furnished on every machine.

Extra Features

Cocker Sections have • Stronger frames, ball bearings and chain drives • Split sprockets • Two stainless steel vacuum breakers • Jack screw idlers • Teflon Coated ASME cylinders (approved and labeled) • Cocker designed bracing between bottom and top cylinders eliminates sway or rock at high speeds and under heavy loads. No Cocker slasher has ever needed additional bracing after installation.

PLUS Accurate Control

Each cylinder can be set at any temperature and drying steps can be accurately graduated to obtain any desired result.

Don't pay for something you don't get. Let us give you full information.

COCKER MACHINE & FOUNDRY COMPANY

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Montreal, Canada
Oxford 7-2242

IN MEXICO:
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I. La Catolica 45-911
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PLANT & OFFICES
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WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

MODERN EXTREMULTUS BELTING

MAINTAINS CONSTANT SPINDLE SPEED

For increased power transmisison belt efficiency use EXTREMULTUS on these textile applications too!

- WINDERS
- WOOLEN CARDS
- COTTON CARDS
- AUTO LEVELLERS
- PICKERS
- SPINNING FRAMES
- ROVING FRAMES
- OPENERS
- LOOMS

TWISTERS

INCREASE PRODUCTION Extremultus belting will not stretch . . . will not slip . . . even on starting. This enables you to maintain constant spindle speed on twisters for more production . . . every day. Constant spindle speed means better build up . . . uniform twist.

REDUCE MAINTENANCE Because Extremultus will not stretch you eliminate costly downtime for belt take-up, or replacement. Extremultus also reduces bearing loads and will outlast all other belting, eliminates lap failures.

(Even oil from spindle will not cause Extremultus to slip)

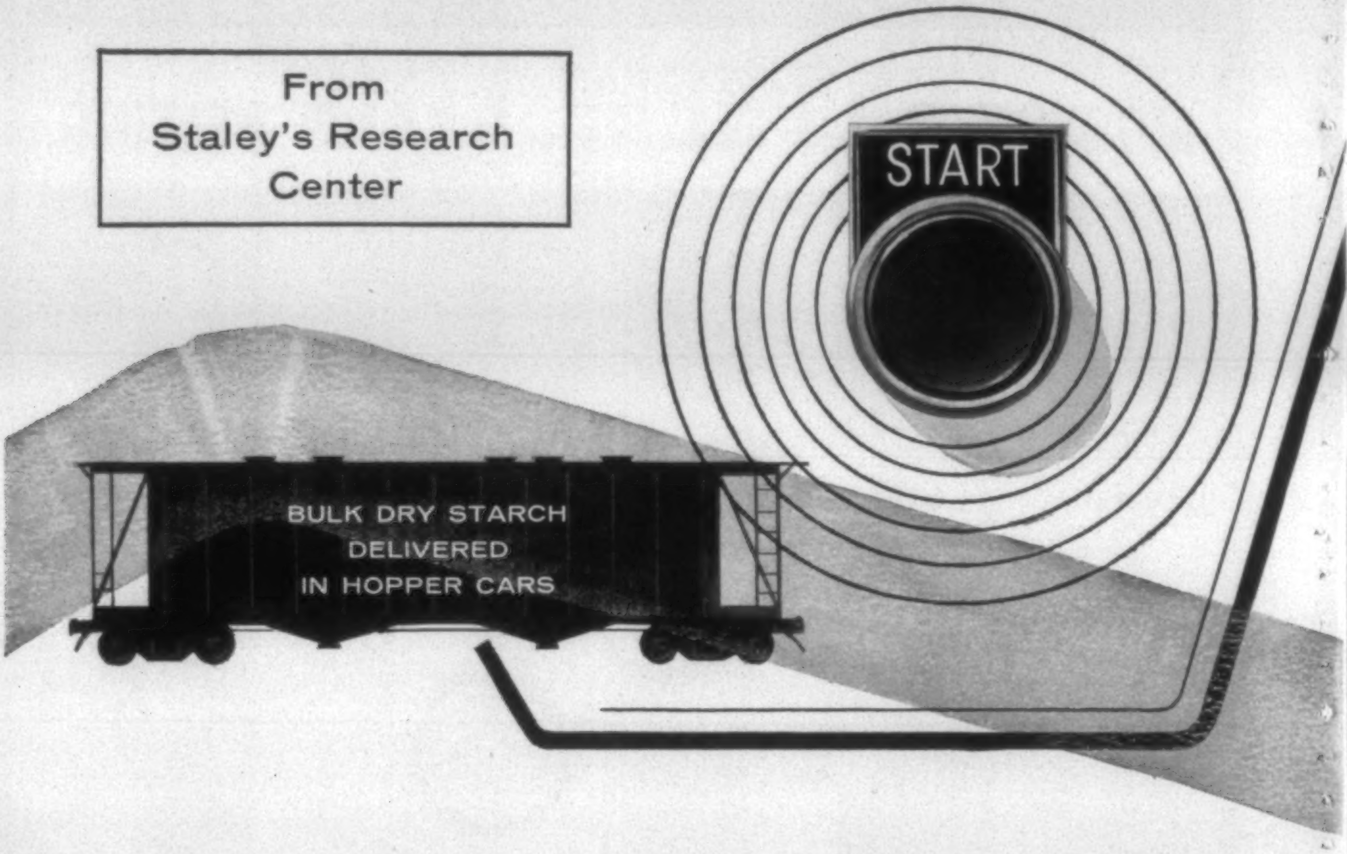
Write for Extremultus catalogue and the name of your local distributor. Ask him to *prove* what Extremultus can do on the drive you select.

THE BEST DRIVE AT
THE LOWEST COST

EXTREMULTUS, INC.

25-11 40th Avenue, Long Island City 1, N. Y.

From
Staley's Research
Center



Push-button automation in size

—and the revolutionary new high-temperature converter—developed by Staley's—makes it possible!

Invented after years of research by the A. E. Staley Mfg. Co., the High Temperature Converter is more than a mere cooking device. It's an amazing *new system* that transforms low cost pearl starch into a UNIFORM VISCOSITY, "thin boiling" size, with the exact viscosity and stability, the exact properties and size characteristics you need.

And—when working with other automation components, the high temperature converter provides complete and automatic control of the starch at every step—from hopper car to slurry tank to size boxes.

Just push the button. In less than 10 minutes, the converter delivers not just a batch but a *constant supply* of the precise, *uniform* warp size you desire—at definite savings.

What about quality? The finished warp size possesses high uniformity in solids concentration, viscosity and degree of conversion. Forms clear, flexible films with noticeably improved adhesion. Affords outstanding viscosity stability with exceptional resistance to breakdown and aging! Sizes produced have noncongealing characteristics similar to some of the high priced and premium starches on the market.

Although there are many factors other than size which influence weaving efficiency, many mills report definite improvements in slashing and weaving performance, such as: (1) Quicker start-up of slashers, (2) Greater uniformity of add-on, (3) Reduced hard-size on boxes and yarns, (4) Less breaking, less ends out of lease, (5) Less scum in size boxes, (6) Smoother sized yarns, (7) Loom stops substantially reduced, (8) Definite reduction of hard-size streaks, (9) Fewer stuck ends, (10) Greater ease of drawing-in, (11) Marked reduction in seconds.

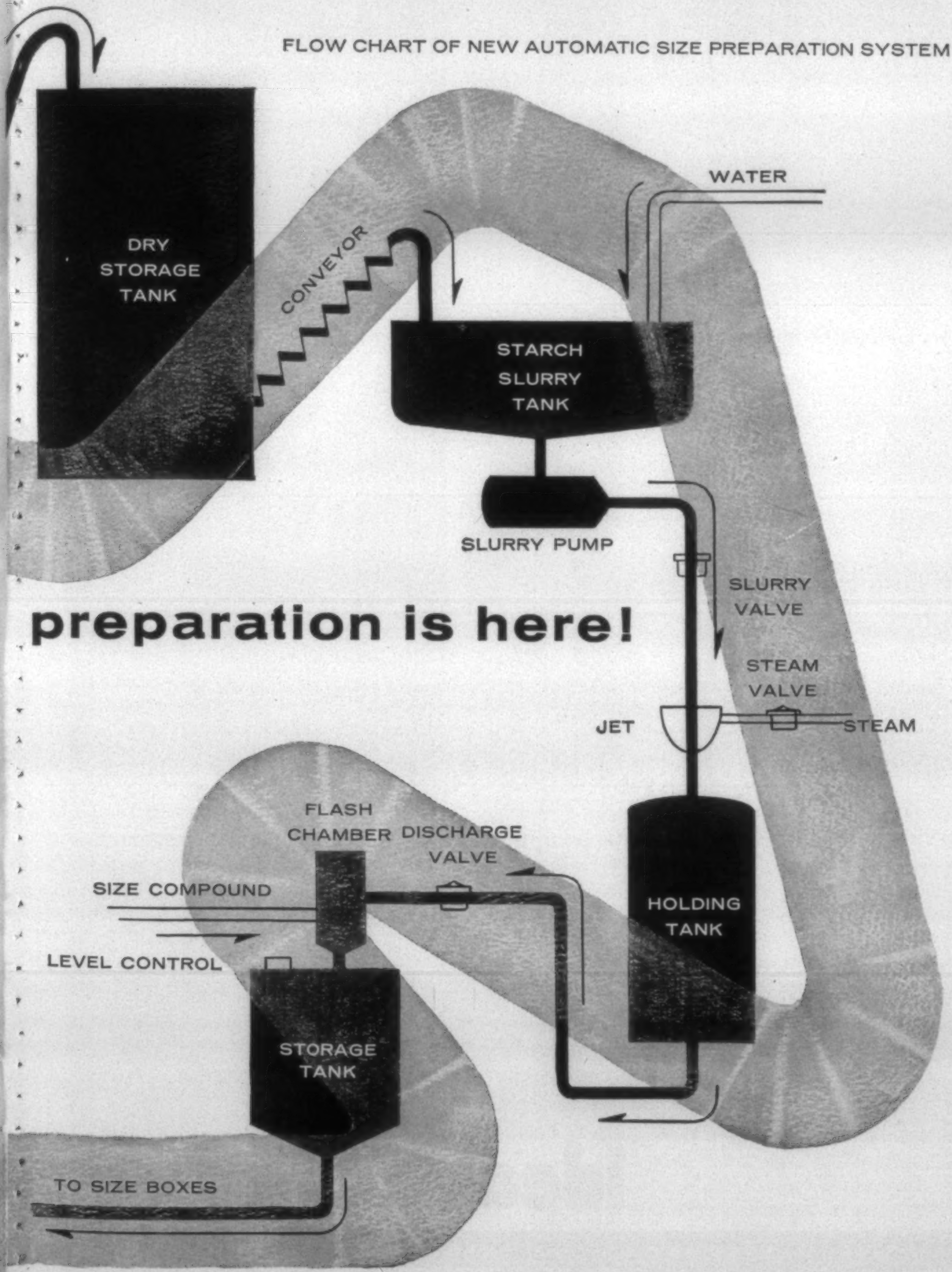
These are but a few highlights. For complete data on Staley's new High Temperature Converter and how it affords textile mills new savings, new production efficiencies, new profit opportunities heretofore unattainable, see your Staley Representative, or write:

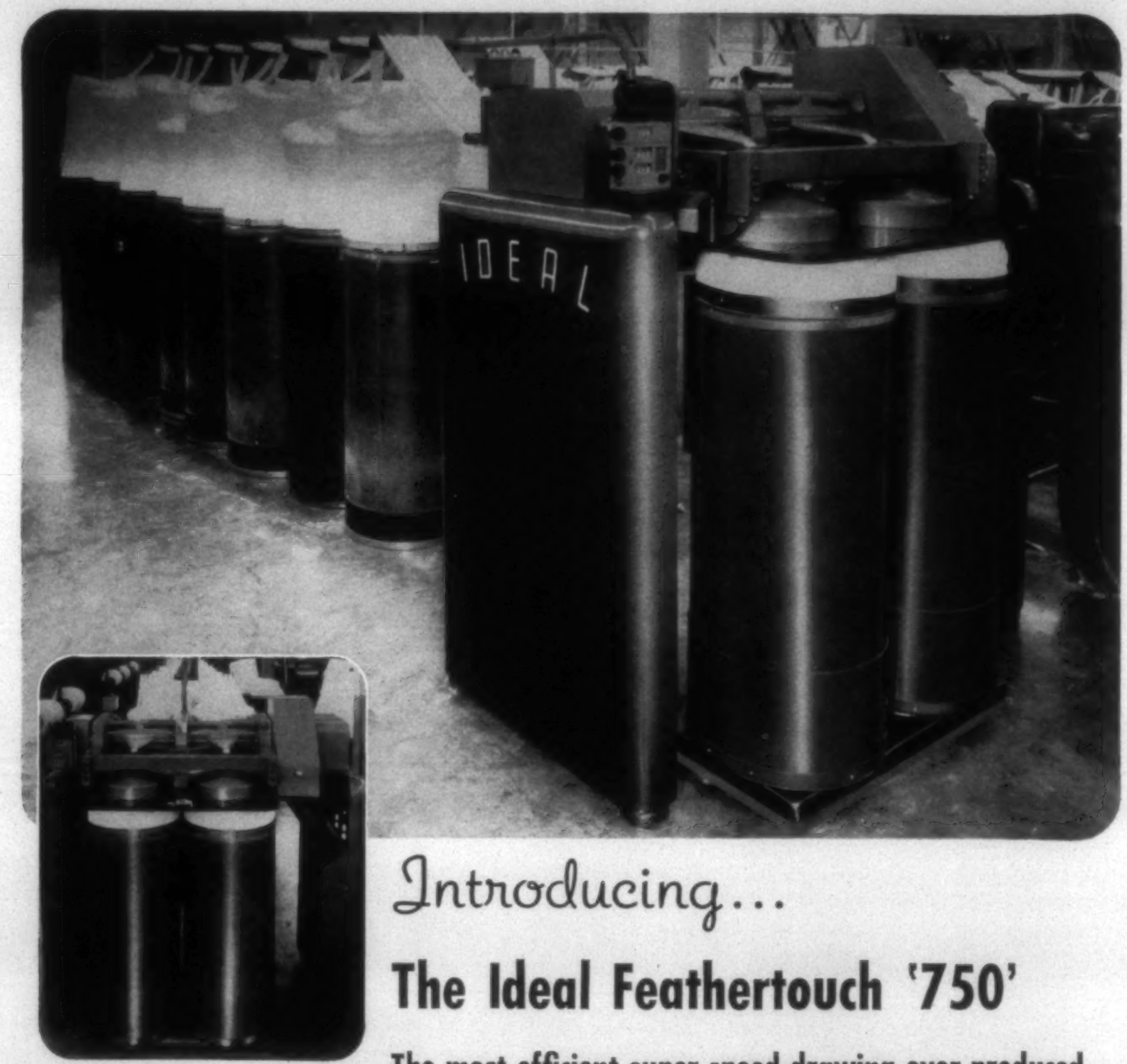
A. E. STALEY MFG. CO.
Decatur, Illinois

ATLANTA • BOSTON • CHICAGO • CLEVELAND • KANSAS CITY • NEW YORK • PHILADELPHIA • SAN FRANCISCO • ST. LOUIS

preparation is here!

FLOW CHART OF NEW AUTOMATIC SIZE PREPARATION SYSTEM





Coiling in 15" through 18" diameter cans up to 42" high.

Introducing...

The Ideal Feathertouch '750'

The most efficient super speed drawing ever produced

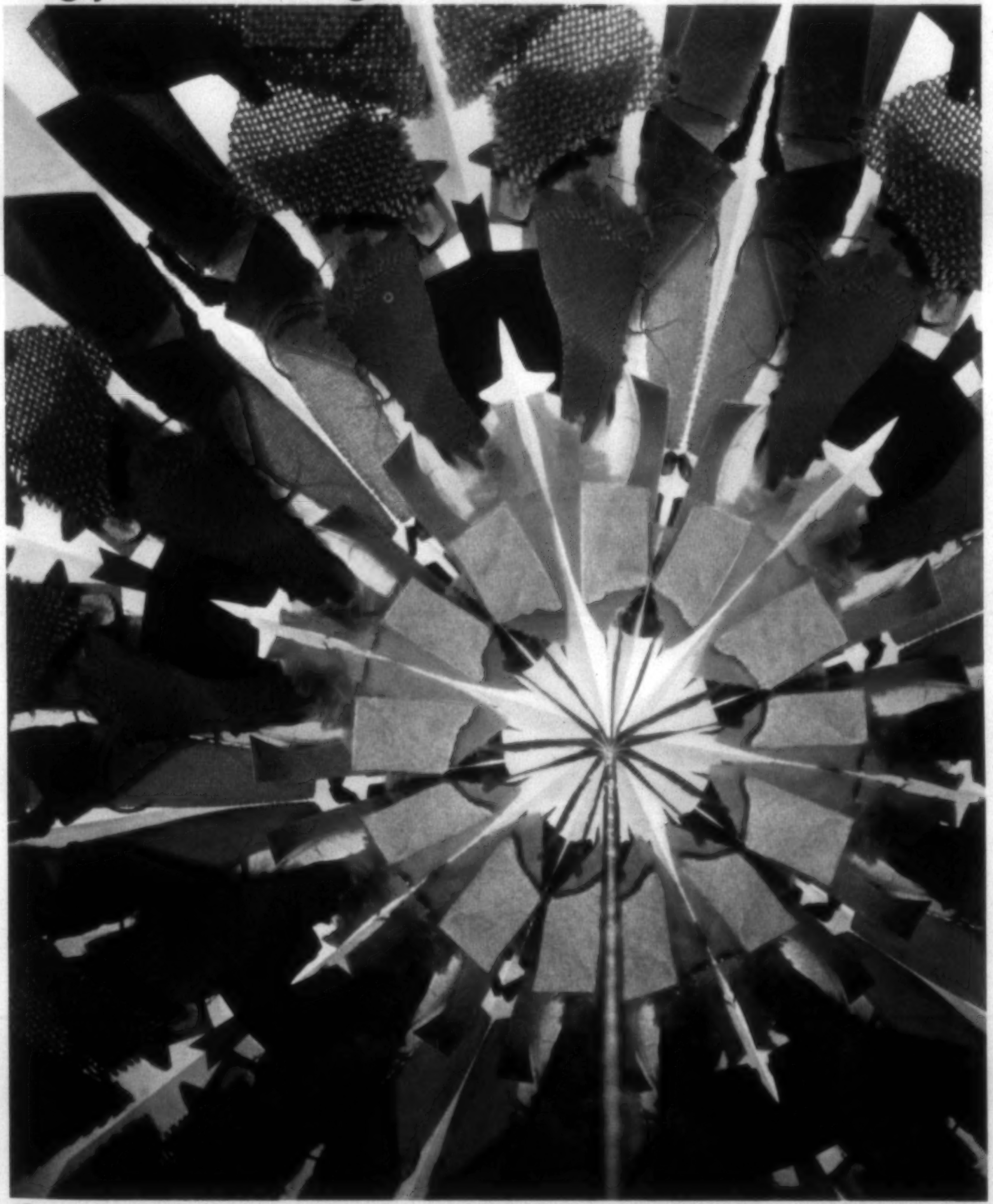
This two delivery frame produces as much sliver of the highest quality as does the average latest model four delivery frame. The Ideal '750' permits safe, practical, and steady speeds of 750 fpm with far less downtime than is encountered with four delivery frames. It saves on original investment, saves floor space, and drafts all fibers and blends.

Write today for full information on the extremely efficient Ideal Feathertouch '750'.

Ideal **Industries, Inc.**
Bessemer City, N. C.

THE ORIGINATORS OF HIGH SPEED DRAWING

Geigy offers a brighter '61



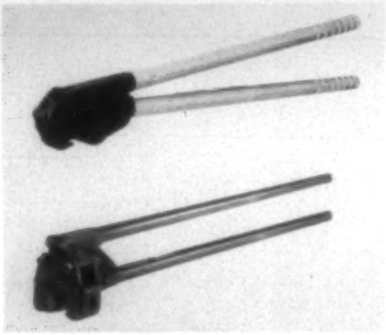
Assurance of a brighter new year for our customers is offered through an expanded program of unparalleled technical assistance.

Geigy Dyestuffs

For The Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Steel Strapping Sealers



Two new steel strapping sealers, Model B-1435 *(top)* and Model UB-250 have been introduced by Signode Steel Strapping Co.

Signode Steel Strapping Co., Chicago, Ill., has introduced two new sealers designed to assure properly sealed joints on heavy duty strapping.

Both the model B-1435 for 1¼" strapping and the UB-250 for 2" strapping incorporate Signode's new sure seal device which requires that the sealing stroke be properly completed before the sealer can be released from the strapping, thus virtually eliminating any possibility of miscrimping.

Improved crimping makes stronger, safer joints with increased resistance to shock loads; the lighter weight and shorter length make the improved tools easier to handle, and there is less maintenance necessary with the new design.

(Request Item No. A-1)

Web Viewer

The Mount Hope Machine Co., Taunton, Mass., has introduced a new web viewer which permits the inspection of moving textiles. The optical machine provides close-ups or full-width examination of materials without interrupting production schedules. As the material (plain or printed) passes the web viewer, an oscillating mirror system, which is automatically synchronized to the speed of the material, scans a given section, causing it to appear stationary. As each section passes from view the mirror system returns to the beginning of the stroke and "picks up" visually the next section to be examined.

The Mount Hope web viewer may be adjusted to examine patterns of different repeat lengths. This device permits careful inspection of colors, structure or register. With the mirror system operating at 400 cycles per minute, speeds at which the material may be viewed are determined by multiplying the repeat length by 400. Materials running at speeds up to 1,500 f.p.m. can be examined in 45"-long sections. The retractible 4X binocular allows closer inspection of any local area within the section.

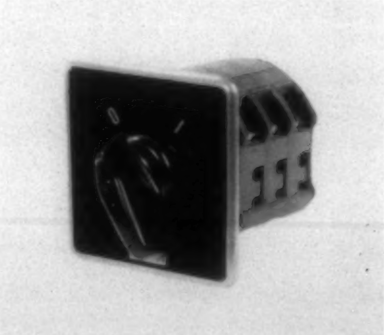
(Request Item No. A-2)

Non-Slip Finish

A new weighter finish with non-slip properties, Rexobond 46, has been developed by the Emkay Chemical Co., Elizabeth, N. J. The finish is reported to be a highly active product in liquid form. It disperses readily and is compatible with dye fixing agents, resins and water repellents. When used with water repellents of the semi-durable type, spray ratings are maintained with greatly improved hand. Samples and working formulas are available.

(Request Item No. A-3)

Motor Protection Switches



For protection of low rated motors of 1 h.p. or less, Wood Industries Inc. of Ipswich, Mass., has introduced a new line of precision-engineered switches, the Weber M10. These low cost motor controllers, less than half the size of comparable motor protection switches, are designed to meet the needs of the polyphase, fractional-horsepower motor user.

Designed for use from .07 up to 1 h.p. at 440 volts, the M10 has a large rotary handle that moves through 90° to give a positive visual indication of overload, even from a distance. The need for a pilot indicating light is said to be eliminated. Because the mechanism is completely trip free from the operating handle, the switch cannot be held closed under any harmful overload conditions. After overload tripping, the M10 automatically resets itself and is ready for immediate reclosing.

To compensate for changes in ambient temperature which might cause unwanted switch operation, the M10 has a built-in temperature compensating device. A thermal over-current time-delay tripping element also prevents needless trip-out of the switch because of momentary harmless overloads, Wood reports.

Designed for flush or separate enclosure mounting, the over-all dimensions for these switches are only 4 x 4 x 3¼". The units are priced at $7.

(Request Item No. A-4)

Direct Brown

A new color has been added to its line for the application by the polimize yarn dyeing process, according to Althouse Chemical Co., Reading, Pa.

Designated as Polimize Brown PLM, the new color is for application of a direct brown for cotton, by use of the polimize package dye and packaged-dyed cotton yarn process.

It is described as an ideal base for the dyeing of wash-fast browns on cotton yarn, not only because of its very good tinctorial strength and pile on properties, but because of the even exhaust and level dyeing properties throughout the dyeing operation.

(Request Item No. A-5)

New Clamps For Lift Trucks

The Cascade Mfg. Co., Portland, Ore., has added three new cotton clamp models to its line of hydraulic lift truck attachments. Maximum cotton clamp openings range from 67¼ to 90" to cover basic cotton handling requirements. The new clamps are designed to fit 2,000 to 5,000-lb. capacity lift trucks.

According to Cascade, the cotton

clamps have many new features. Among them are nylon bushed arm carriers which eliminate the need for field lubrication and the problem of grease getting on the bales. These bushings also eliminate metal-to-metal wear. Faster arm action is provided through high volume oil supply and cylinders and check valves of special design.

To withstand the rugged abuse given cotton clamps and the possibility of arm and cylinder damage, the new Cascade clamps utilize extra strong integral arm and frame construction. Hydraulic cylinders are heavy-duty and self-aligning. A full width steel bumper on the face of the clamp is used for maximum protection to bales and clamps.

(Request Item No. A-6)

Rayon For Nonwovens

A new rayon fiber has been introduced that is said to make possible the manufacture of nonwoven fabrics from 100% man-made fibers without the necessity of working the fiber, or adding pulps, fillers or bonding agents other than water to form a slurry.

American Viscose Corp., Philadelphia, Pa., reports that its new RD-101 is a short, multi-cell rayon fiber which posesses unique properties. When formed into a wet-laid web and dried, these nonthermoplastic fibers firmly bond themselves and lock into place other fibers with which they are intermixed. This characteristic means they can be used to produce wet-formed nonwovens of either 100% RD-101 or in blends with other fibers or pulp. It makes possible a wide range of textures and physical properties, either with or without the addition of some bonding agents.

(Request Item No. A-7)

New Central Station Air-Conditioning Unit

A new line of packaged central station air-conditioning units, featuring a complete selection of Better Air filters, has been introduced by American Air Filter Co., Louisville, Ky. The new Kennard-Nelson units provide a complete central station package where all components, including fans, coils, humidifiers, dampers, filters, frame and casing are designed, fabricated and tested by one manufacturer.

A complete selection of both unit and automatic air filters are available as preselected and matched components of an air-conditioning unit. The new units are said to be engineered to meet exacting conditions of air quantities, temperatures and humidities, and to provide any degree of air cleaning—all in one package the company reports.

Several unit construction features have been incorporated into the basic unit design including a Penta-Post frame, five-angle corner post, all welded construction of heavy gauge steel, which provides maximum strength and stiffness with minimum weight—a double drain pan with 1" insulation between the pans and a choice of metals for the pans to permit flexibility—opposed blade dampers for uniform air distribution—and insulated panels with quick opening access doors.

Air filters available for the particular situation includes AMERglas throwaway, HV2 permanent cleanable unit filters, and automatic filters such as the automatic renewable media Roll-O-Matic, and the Rollotron, a combination dry electrostatic with the automatic renewable media filter.

The new Kennard-Nelson line is available in both horizontal and vertical

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New Model M-200 Moisture Monitor uses hand detector roll to read moisture in moving or standing warps, fabrics, and picker laps.
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(Request Item No. A-8)

Crimped Corval

Courtaulds (Ala.) Inc. has announced the availability of a new permanently crimped cross-linked rayon, to be known as Corval II. This fiber replaces the uncrimped cross-linked rayon introduced by the company as Corval in 1958.

Effective December 1, Corval II will be sold under Courtaulds' registered trademark Corval in deniers from $1\frac{1}{2}$ through 15 in all normal lengths of semi-dull luster. Technical advancements in manufacture of the new fiber have resulted in a reduction of price from 40 to 37 cents per lb.

According to Courtaulds, this fiber has superior bulk and cover to all other man-made cellulosic fibers. It may be processed on all systems of spinning and dyed with all classes of cellulosic dyestuffs.

(Request Item No. A-9)

Fabric Softener

Introduction of two new fabric softeners for finishing plants have been announced by the finishing division of Texize Chemicals Inc., Greenville, S. C. The first new product, called Tex-Wet 1048, is compatible with resins for treatment of wash-and-wear fabrics and will impart softness to these, Texize reports.

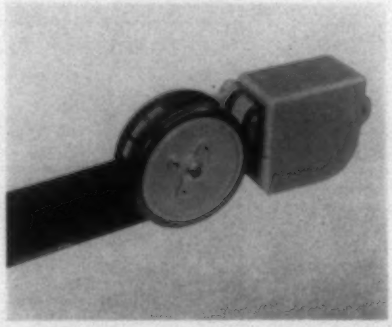
This softener contains polyethylene and is a non-ionic emulsion system, with no yellowing characteristics showing on fabrics after use. Tex-Wet 1048 is stable both in resin systems and in the new catalyst systems now being employed in the industry. It contains no extenders. Made with controlled particle size, it is designed to give better hand to resin-treated fabrics. The new softener is available in either drums or bulk.

The other product is a new towel softener which can be manufactured so as to be compatible with the finishing specifications and fabric requirements of individual plants.

Known as Tex-Wet 1034, the product is made up as white cream paste and is designed to provide a soft, lofty feel to toweling without yellowing whites or affecting pastel shades. The oily feel sometimes associated with softeners is also eliminated with use of the new product.

(Request Item No. A-10)

Fabric Identification



Because the new Fabri-Mark Model 100 printing attachment recently introduced by the Fabri-Mark Corp. of Newark, N. J. is driven by the machine to which it is attached or by frictional contact with a moving web, it is described as a virtually cost-free way to identify material as to content, color, size, lot number, etc., by the company.

Easily attached to any machine on which material is fed in a continuous belt or web, the new machine places a sharp,

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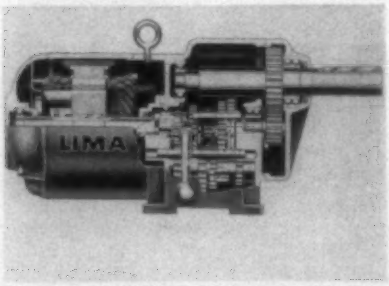
indelible identification at regular intervals on the selvage or on any other part of the material.

The Fabri-Mark printer is designed to operate at normal production speeds, requiring minimum maintenance and needing no additional power output. It also features quick change printing and inking cylinders for different messages or printing ink colors. Special inks are available for printing on hard-to-register surfaces or for printing in red, blue, green, black, violet and yellow.

(Request Item No. A-11)

Gearshift Drive



The Lima Electric Motor Co. Inc., Lima, Ohio, has announced the redesign of its Type R3C, 1-5 h.p. Lima gearshift drive.

The new design is said to give lower output shaft speeds which are capable of handling severe load requirements. The extra heavy alloy steel output shaft is mounted on widely spaced ball bearings to provide rigid support for extreme overhung loads.

The company reports that the conviently located gearshift lever makes the four gear changes easily and that the levers come in four optional positions. Simply constructed, the shifting mechanism is positive and easy to operate.

The Type R3C is designed to operate on polyphase, a.c. power supplies of standard frequencies (25-50-60 cycles) and voltages below 600. The compact design of the combination selective speed transmission and electric motor is said to give high operating efficiency and to require a minimum of mounting space.

(Request Item No. A-12)

Nonionic Surfactants

Five new nonionic surfactants have been introduced by Union Carbide Chemicals Co., New York City, for use in the textile industry. This makes a total of 20 surfactants—15 of them nonionics—available from Carbide.

Three of the new surfactants—Tergitol nonionics 12-P-6, 12-P-9, and 12-P-12—are based on dodecyl phenol. Two are based on trimethyl nonanol—Tergitol nonionics TMN-3 and TMN-10, according to the company.

Tergitol 12-P-6 is a dodecyl phenol adduct with 6 mols of ethylene oxide. It is soluble in aromatic and aliphatic hydrocarbons and suitable for sulfation. Tergitol 12-P-9 is a dodecyl phenol adduct with 9 mols of ethylene oxide. It is suitable in aromatic hydrocarbons and can be used in place of nonyl phenol adducts containing 5 to 8 mols of ethylene oxide. Tergitol nonionic 12-P-12 is a dodecyl phenol adduct with 12 mols of ethylene oxide. It is a general purpose nonionic, completely water soluble. Tergitol TMN-3, a trimethyl nonanol adduct with 3 mols of ethylene oxide, is soluble in aromatic hydrocarbons and slightly soluble in aliphatic hydrocarbons and mineral oil. Tergitol TMN-10 is a trimethyl nonanol adduct with 10 mols of ethylene oxide. This general purpose surfactant is also completely water soluble reports Carbide.

Tergitol nonionics 12-P-6, 12-P-9 and 12-P-12 are available in tank car quan-

white NON-FLUID OIL
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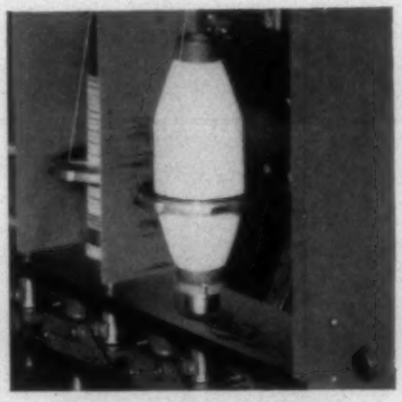
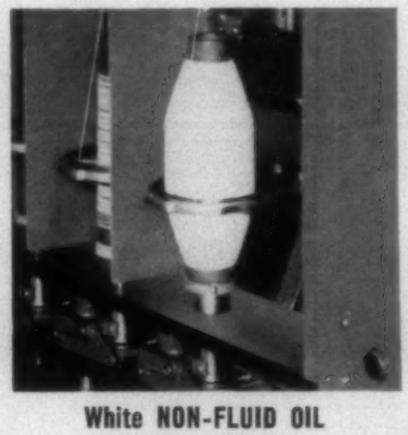


Ordinary Oils or Greases
Spatter onto Bobbins



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If you are harried by broken yarn ends, blackened yarn and low output there is a simple solution . . . . switch to white NON-FLUID OIL.

Ordinary liquid oils drip and spatter on bobbins . . . greases cause yarn strain from traveler friction on rings.

White NON-FLUID OIL stays on rings and off goods in process. It provides 100% lubrication resulting in increased production. Because of this, you need less lubricant and fewer applications, making white NON-FLUID OIL the most economical to use.

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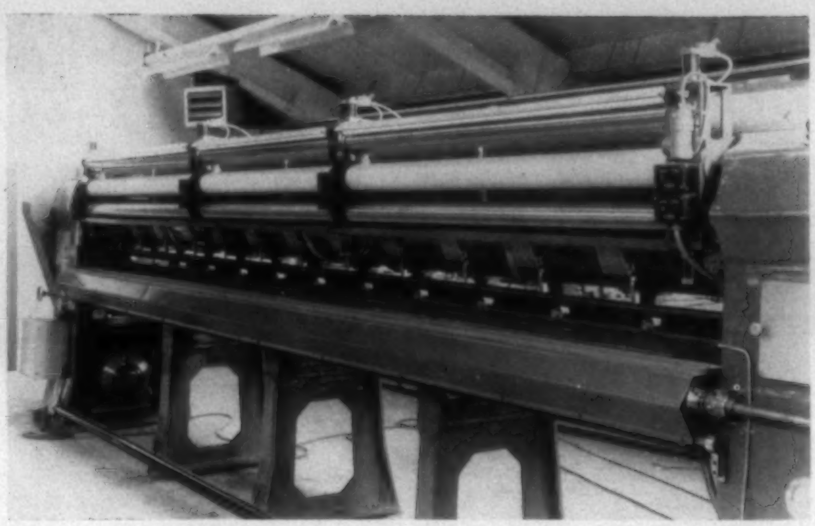
tities and drum quantities. Prices are 22½ cents a pound for tank-car lots, 25 cents a pound for truck-loads of drums, and 27 cents a pound for less than truck-load lots of drums. Tergitol nonionics TMN-3 and TMN-10 are available in drum quantities. Prices are 27½ cents for truck-loads of drums and 28½ cents a pound for less than truck-load lots of drums.

(Request Item No. A-13)

New Yarn Feed For Tufting Machines →



British Tufting Machinery Ltd., Blackburn, England, has introduced what it describes as a radically new form of yarn feed for its tufting machines that is expected to raise tufting efficiencies and minimize downtime.

The feed consists of a central roller coated with a plastic compound specially developed to give a high friction value when the yarn is under tension but which does not hold the yarn against it should an end break. This roller is sandwiched between two similar rollers fitted with air cylinders, the purpose of which is to apply a controlled pressure nip. This serves to cold iron the yarn before it enters the tufting needles. Latex splices are compressed and elongated so that when they reach the tufting needles there is a reduced tendency for breakages to occur. Yarn passes into the first nip from the front, passing behind the plastic coated roller and emerging from the lower nip.

The nip rollers are pneumatically loaded from each end and there is a quick release on either the upper or lower rollers. As the yarn enters at the top of the unit there is a danger of the operatives catching their hands on the nip. To overcome this B.T.M. has incorporated a photo-electric detector motion and if a hand is brought anywhere near the nip the rollers at once separate. The operative has to press a button to re-apply the nip, but this button does not operate if the hand is still obstructing the light beam to the photo cell.

To overcome bowing tendencies, B.T.M. has designed the unit so that on the 18' machine it is in three sections. This means that there is a firm compression across the full width of the entire yarn sheet which is divided into three sections before entering the machine's needle bar. The twin-nip triple-roller feed system is a new innovation for use specifically with ⅛"-gauge tufting machines, but it can be fitted to any existing tufting machine.

(Request Item No. A-14)

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Acid Yellow, Crimson

Two new dyes have been added by Allied Chemical Co. to its line of National Fast dyes. They are National Fast Brilliant Crimson RB and Wool Yellow GL.

The new Crimson is said to produce bright clear colors from shades of pink to deep carmine on wool, silk and nylon. Exceptional tinctorial strength, good light fastness and above average wet fastness are said to result when National Fast Brilliant Crimson RB is applied by conventional methods.

The new yellow is said to be level-dyeing and to offer good light and wet fastness, plus outstanding working properties. It is especially recommended for wool, Nylon 6, and Nylon 66 as well as for wool-silk and cross-dyed wool-Dacron blends.

Both dyes are recommended by Allied for dyeing suitings, dress goods, carpet yarns and wool or felt hats.

(Request Item No. A-15)

Blue-White Acetate

Eastman Chemical Products Inc., New York City, has developed a blue-white solution dyed acetate, developed especially for bridal wear fabrics. Diamond-White Chromspun 332 is said to eliminate the expensive extra processing which was formerly required to achieve this desired shade for lustrous satins and peaus and crisp, gleaming taffetas.

The new acetate is expected to have a wide variety of apparel uses. It will be available in 100, 150 and 300 deniers.

(Request Item No. A-16)

Flocked Mylar

Cellusuede Products Inc., Rockford, Ill., has announced the development of a rayon flocking for Du Pont's Mylar polyester film.

The company is offering flocked Mylar in a wide range of colors to provide an attractive and durable protective film, to help silence noises and to cushion and dampen vibration. Though soft and velvet-like in appearance, flocked Mylar is said to be extremely tough and flexible.

(Request Item No. A-17)

Reactive Blue

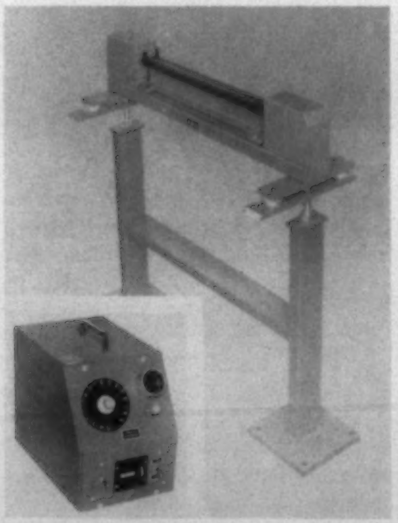
A new addition to its line of Procion and Procion H dyestuffs, Procion Brilliant Blue H5GS, has been introduced by Arnold, Hoffman & Co., Providence, R. I. This new reactive turquoise is a slightly redder in share than Procion Brilliant Blue H7GS.

The new dye is said to feature excellent building-up properties and freedom from staining during washing off. It is applied by the normally recommended formulas for Procion H dyes, using either conventional or emulsion thickenings. Besides its value in self shades, it is described as suitable for admixture with yellow Procion H dyes to give a range of brilliant greens.

Its high tinctorial strength, low affinity and ease of washing off make the new dye of greatest value in the continuous dyeing processes, Arnold, Hoffman reports.

(Request Item No. A-18)

Electronic Yarn Inspector



The Detect-All Mark II *(inset)* used with the Fabrionics warp yarn monitor detects and counts linear defects in yarn as well as end breaks.

A new electronic device introduced by Fabrionics Corp., Huntington, N. Y., is designed to make warp yarn inspection more accurate than ever before. The device, called the Detect-All Mark II, is designed for use as an accessory with the Fabrionics Warp Yarn Monitor, a photo-electric yarn defect detector.

The Detect-All Mark II is designed to detect and count linear defects and end breaks and to stop the warper for their removal. The system is said to have an unusual level of accuracy because it cuts out extraneous interferences with the signal from the photo-electric detector.

A unique feature of the system is the inclusion of a cathode ray oscilloscope. Detector signals are continuously monitored on the oscilloscope screen so the operator can identify and remove the sources of interference.

Because of its high degree of accuracy and sentitivity, the new system is said to permit the warn yarn monitor to be operated without a light cover. This means that yarn ends are readily accessible and rethreading broken ends becomes a simple matter.

(Request Item No. A-19)

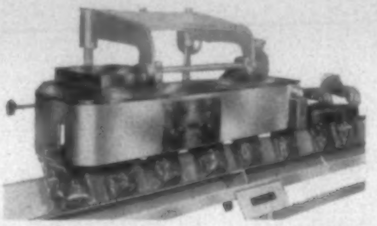
Improved Avril

A new rayon fiber has been developed by American Viscose Corp., Philadelphia, Pa. Fiber 40, which is promoted to the consumer as Avril rayon, has been produced in pilot quantities on commercial equipment with greatly increased strength and toughness, the company reports.

The strength characteristics are said to permit the spinning of finer yarns and widens the potential area of blending applications with cotton as well as synthetic fibers. The inherent stability of the new Fiber 40 is said to permit fabric pre-shrinking on conventional equipment. Fabrics of this fiber will readily accept resin finishes for wash-and-wear applications. The strength of resin treated fabrics made from the new fiber will be from 50 to 100% stronger than like fabrics made with current stable rayon or cotton, American Viscose reports.

(Request Item No. A-20)

Poly Bag Sealer

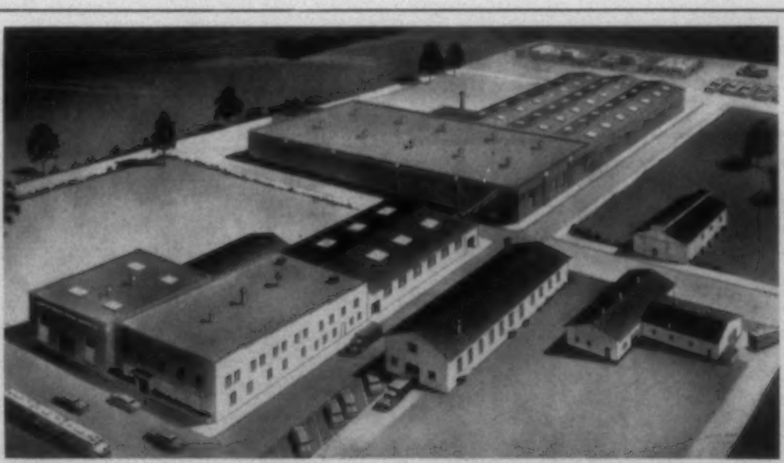


Pack-Rite Machines, Milwaukee, Wisc., has developed a new unit for heat sealing and trimming poly bags. The unit automatically trims off up to 4¾" of excess tops of the bags above the heat seal and automatically ejects or "conveys-out" trimmed-off tops.

Bags may be fed into the machine flat, heads up or at an angle. Undercarriage guards are supplied to cover belts and pulleys, when the under part of the sealer is exposed to the operator while feeding bags at an angle or flat.

The new sealer is 48x21x9" high, excluding the floor stand. Built into the sealer is a variable speed drive with a range of 315 to 995 lineal inches per minute—also an electric eye safety device with fail-safe arrangement and reset button for restarting the unit should any product, card or foreign material get into the seal area.

(Request Item No. A-21)



CONSTRUCTION OF A LARGE ADDITION to its fabricating plant is underway at Gaston County Dyeing Machine Co., Stanley, N. C., and is expected to be completed early in 1961. Gaston County Dyeing is a major producer of pressure dyeing and drying machinery for the textile industry. The new facility will be used mainly for fabrication of products for the chemical industry since all existing space is needed for the production of textile equipment. Total floor space of the plant will be 85,000 square feet when the addition is finished.

For the Mill Bookshelf

Packaged Hydraulic Systems

The application of packaged hydraulic systems to solve a wide range of process control problems is the subject of a new 6-page bulletin published by Vickers Inc., Detroit, Mich., division of Sherry Rand Corp.

Bulletin I-5802 includes numerous illustrations showing typical packaged hydraulic systems and installations. Advantages of hydraulics in process control are listed, and standard components are illustrated.

(Request Item No. A-22)

Monitoring Systems

Monitor Systems Inc., Fort Washington, Pa., a subsidiary of Epsco Inc., has published a 12-page, 2-color brochure describing its facilities for engineering and production of advanced ultra-reliable systems for high speed process monitoring, production testing and automatic checkout.

In addition, the brochure discusses significant accomplishments, corporate facilities, key personnel, and typical data systems for industry.

(Request Item No. A-23)

Voltmeters, Ammeters

General Electric Co., Schenectady, N. Y., has announced the publication of a new booklet on its Type AB-30 180°-scale switchboard instruments. It describes a new line of low-cost a.c. voltmeters and ammeters. Incorporated in the 4-page pamphlet are graphs that detail features, specifications and prices of the units.

(Request Item No. A-24)

Fiber Facts

The 1961 edition of "Fiber Facts" is now being distributed by American Viscose Corp., Philadelphia, Pa. In addition to an expanded glossary, denier conversion tables, and current data on its personnel and products, this textile digest contains a broad explanation of the Avisco Integrity Tag Program and a 22-page "Guide to Man-Made Fibers."

Based on the Man-Made Fiber Products Identification Act, the guide includes Federal Trade Commission fiber definitions, a table of physical properties, and a summary of characteristics and end-use applications for each generic fiber classification as well as a listing of fiber trademarks and producers.

(Request Item No. A-25)

Bow Spreader Roll

The Aquatrol Expander, a new bow spreader roll, is the subject of a 4-page bulletin recently issued by the Rodney Hunt Machine Co. of Orange, Mass. The Aquatrol has a single moving part, a rotating rubber sleeve that floats on a film of water. The bulletin describes the economic benefits and design features of the roll.

(Request Item No. A-26)

Plastic Wrapping

A 4-page specification sheet describing nine new machines available for a variety of industries to take advantage of overwrapping with plastic films has been released by Battle Creek (Mich.) Packaging Machines Inc.

The pamphlet explains how the new models handle a wide variety of product types, sizes and shapes. In addition, the 2-color brochure describes Thermo-Pad sealing, one-shot lubrication, static eliminators, positive film control, end and under sealing, and electronic heat controls. Size capabilities of each of the machines are listed with a full description and condensed technical data.

(Request Item No. A-27)

Packaged Controls

Bulletin GEA-6334A from General Electric, Schenectady, N. Y., describes the company's Pan-A-Trol panels for use with textile machinery, machine tools, air-conditioning and similar equipment. The 8-page publication explains product features and reliability and how panels are specially designed and tailored for specific control needs by the company's general purpose control department. Photos show various devices used in the Pan-A-Trol packaged control unit including contactors, starters, relays, switches, timers, terminal boards and pushbuttons.

(Request Item No. A-28)

Circular Slide Rule

General Industrial Co., Chicago, Ill., is again offering free its circular slide rule for engineers and other plant and office executives. The slide rule is designed to be of help to anyone who must perform simple calculations. Operation is said to be simple and results accurate. Complete instructions are included with the rule. Write on company letterhead to General Industrial Co., 1788J Montrose Ave., Chicago 13, Ill.

(Request Item No. A-29)

Edge Finishing Machine

A new bulletin describing its Series S2 Automatic Edge Finishing Machine is available from The Reece Corp., Waltham, Mass.

This bulletin illustrates how the machine tacks across the exact width of straps, bands, tapes, etc., and cuts off surplus material in a single automatic operation. There are no chained off ends to trim or ravel back, the bulletin reports.

The machine has a range of 1/4 to 1 1/2" and is said to offer greater speed and a neater finish than operations previously employed.

(Request Item No. A-30)

Vat Dyeing Techniques

A report on the latest vat-dyeing techniques for cellulosic fibers has been released by General Dyestuff Co., New York City, a division of General Aniline & Film Corp.

Primarily concerned with the company's Indanthrene dyestuffs on cotton piece goods, the 120-page publication covers the complete field of vat dye applications.

The brochure treats the application, properties and uses of 70 different vat dyes under the classification of Indanthrene vat dyes. In addition, it gives complete descriptions of techniques, formulations and the methods involved, dye property tables and a complete vat dye index with both company trade names and color index generic names and numbers.

(Request Item No. A-31)

Control Valves

OPW-Jordan Corp., Cincinnati, Ohio, has released a new catalog which gives applications, operating features and characteristics, materials of construction, and pressure and temperature limitations of its sliding gate and plate control valves. Photos and cut-sections, flow curve, sizing charts and sample specifications are included.

The brochure also describes the company's controllers, positioners, and other accessories.

(Request Item No. A-32)

Dye Bath Equipment

Gibbs Machine Co., Greensboro, N. C., has issued a bulletin containing technical and price information on the basic bath units and services for dye baths furnished by the company.

These are dye baths for hand stirring, mechanized dye baths, independent mechanized agitator, custom services and accessory equipment. The booklet includes drawings, specifications, and other data designed to help acquaint the reader with Gibbs products.

(Request Item No. A-33)

Ethers And Glycol Diethers

A new 40-page booklet, describing the properties and uses of its ethers and glycol diethers has been published by the Union Carbide Chemicals Co., New York City.

The booklet contains comprehensive data on ethyl ether, isopropyl ether, butyl ether, and 1,4-dioxane and the glycol diethers; diethyl Carbitol, debutyl Carbitol, and methyl ethyl Carbitol.

Also included is information on physical properties; solubilities; constant-boiling mixtures; specification limits; test methods; storage; handling and shipping; physiological properties; and selected literature references.

The glycol diethers are solvents, coupling agents and inert reaction media. They are used as leveling agents for textile dyeing processes.

(Request Item No. A-34)

Management Bookshelf

The American Management Association is making available its "Management Bookshelf—1960-1961," which is a catalog of all books, periodicals and films produced by the association. It includes all in-print publications released by the group to date.

A.M.A. publications are designed to provide today's executive with authoritative reports on the latest developments in his specialized field. The books cover various areas of management concern from financing to personnel.

The new catalog is available from the American Management Association, 1515 Broadway, New York 36, N. Y.

Worth Street Rules

Worth Street Rules, a code of procedure and trade custom applicable to the purchase and sale of cotton textile and allied lines, as approved and promulgated by 12 industry trade organizations, has been issued in a revised and enlarged printing. The full title of the new issue is "Worth Street Rules Effective April 17, 1941, with Revisions to December 1, 1960." The last previous printing contained revisions to January 2, 1957.

The Standard Cotton Textile Salesnote originally approved in 1934 and revised in 1937 and 1941, remains the same as in printings since 1941, as do also specifications FF, FS, G and P, and the definitions and trade customs.

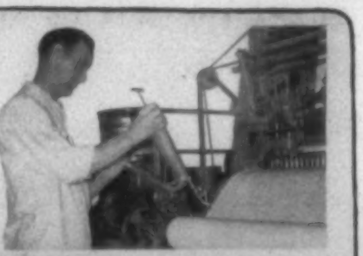
The arbitration section has been extensively revised and includes the current arbitration rules of General Arbitration Council of the Textile Industry as amended December 10, 1959.

Newly added to this printing are the Federal Flammable Fabrics Act and Textile Fiber Products Identification Act, together with Federal Trade Commission Rules and Regulations under these two laws, both ammended to date.

Federal Trade Commission Trade Practice Rules for Shrinkage of Woven Yard Goods, and for the Cotton Converting Industry continue part of the volume. Also included is the full text of Commercial Standard CS59-44, Textiles—Testing and Reporting.

It has been reported that all sections of the volume have been carefully checked from original sources, the contents rearranged in more usable sequence, and sundry items brought up to date by the editor of the 1960 text.

Worth Street Rules is kept in print and is available from The Association of Cotton Textile Merchants of New York, 40 Worth Street, New York 13, N. Y.



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Chief Maintenance Engineer

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Serving The Textile Industry

Ernest Frankl To Represent Belgian Machinery Firm

Ernest L. Frankl Associates, New York City, has been named exclusive sales agent in the U. S. for Ateliers Houget, Belgian textile machinery manufacturer. The Belgian firm produces woolen cards and spinning frames, worsted cards, wool twisters, felt looms and special machines for processing hair, cotton waste and asbestos.

C & K To Continue To Put Textile Business First

The textile business is and promises to continue to be the backbone of Crompton & Knowles Corp., Worcester, Mass., for the foreseeable future, according to James Barringer, vice-president and treasurer. The statement was made to clarify the company's position with regard to its continuing program of diversification.

This broad program of diversification was referred to by Barringer as "supplementing" its textile machinery operation. It will also serve to compensate for the occasional ebb and flow of demand for textile machinery.

Crompton & Knowles began its diversification program in 1953 when the new management under Frederic W. Howe Jr. took over the company. Two years earlier the company had enjoyed its peak sales year. That peak had resulted from postwar demand for textile machinery.

That demand in part had come from the need to supply textiles to war-torn Europe under the Marshall Plan, Barringer said. Once the demand was met, the corporation found itself on shaky ground and the need to diversify was clear.

The company's first purchase was Althouse Chemical Corp. in 1954. Other acquisitions to date are: Wrap-King Corp. of Holyoke, Mass., a packaging firm, 1955; Carl N. Beetle Plastic Corp., Fall River, 1955; facilities for making automatic duckpin bowling spotters in the Worcester plant in 1956; the Russell Packaging Co., Plant City, Fla., with operations moved to Worcester, 1957; Firmaline Products (plastics), Midland Park, N. J., 1960; Bates Chemical Co., Lansdowne, Pa., 1960; F. B. Redington Co. of Chicago, Ill., 1960.

Barringer said that as a result of the three acquisitions in 1960, the company "may have to pause for a while to assimilate these various moves. But in the long range outlook, this should be nothing more than a pause."

Fletcher Modernizes Its Statesville, N. C., Plant

The renovation of its Statesville, N. C., plant has been completed by Fletcher Industries. This marks the completion of the second step in a combined modernization and decentralization program begun two years ago.

The Statesville plant, formerly Turner Mfg. Co., occupies 50,000 square feet of space and will be engaged in the manufacture of narrow fabric looms, twisters and winders. Wooden components for Fletcher machines are being made at Fletcher Southern in Southern Pines, N. C., which was acquired in 1958 as the first part of the decentralization program.

The final step of the decentralization program was begun three months ago when the executive offices and manufacturing facilities were moved to Cheltenham, Pa.

Van Waters & Rogers To Be Shawinigan Resins Agent

Shawinigan Resins Corp., Springfield, Mass., has appointed Van Waters & Rogers Co. of Dallas as the company's sales agent in the state of Texas. Van Waters, which will handle the sale of Shawinigan's entire product line of polyvinyl resins and emulsions, is well known throughout the West as an agent for industrial chemicals and raw materials.

Sonoco Products Dedicates New Research Laboratories

Sonoco Products Co., Hartsville, S. C., recently dedicated its new research laboratory building in memory of Dr. James Edward Mills, Sonoco's first chief chemist and research director.

The new center, built at a cost of over a quarter of a million dollars, will house a complete and up-to-date section of laboratories. It will contain three times as much space as the present facilities and is designed so that a second floor or additional wings can be added at a minimum expense.

Included in the new building are ten laboratories, each with a variety of equipment to give Sonoco the facilities for more extensive experimentation and research. New features include a paper pilot plant and a textile constant temperature control room.

Dr. Mills, who died in 1950, was a

A NEW CONSOLIDATED PLANT AND OFFICE BUILDING is being planned by the Roberts Co. of Sanford, N. C. January 2, 1961, has been set by the company as the target date for breaking ground for the first 105,000 square feet of what will ultimately be a 360,000-square-foot-building of modern industrial design. At present, Roberts' facilities are located in seven buildings in Sanford. Completion of the first phase is expected in late Spring 1961. At that time the company will begin manufacturing its Arrow spinning frames and related machinery in the new plant.

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recognized authority on paper chemistry. He graduated from Davidson (N. C.) College and received his M.A. degree from the school. Further graduate work at the University of North Carolina earned him a Ph. D.

In 1934, Dr. Mills joined Sonoco where he did extensive work on papers, lacquers, thinners, synthetic resins, adhesives for plant consumption and other items.

A memorial plaque in the building cites Dr. Mills' "devotion to duty, his untiring search for fundamental truths and his love for his associates."

American Enka Corp. Plans To Expand Nylon Facilities

Plans for a major expansion of its nylon facilities to produce heavy denier yarns for tires, industrial uses, carpets, and other home furnishings were announced recently by American Enka Corp., Enka, N. C.

Exact cost of the project was not announced but the company said that the program would represent a multi-million dollar investment. Construction is scheduled to start immediately while start-up is anticipated within 15 months and full commercial production in 18 months.

The new facilities will allow an increased output of nylon tire yarn which will enable Enka to supply tire manufacturers with either nylon or Tyrex rayon tire yarns. The firm is one of the largest producers of Tyrex yarn which is used in original equipment by all automobile manufacturers.

In addition to the new nylon facility, the corporation plans to build an installation for the recovery of caprolactam from wash waters and waste products.

The expansion is said to provide new jobs for approximately 300 people and where possible openings will be filled with employees from the rayon operation. The nylon operation currently employs about 900 people.

Cluett, Peabody Reports Improved Earnings In 1960

Cluett, Peabody & Co., New York City, predicts that its earnings will be about $4.50 a share for 1960, as compared with $3.60 a share in 1959. Profits for the company will be up even if sales just match those of last year, the firm reports, because the 1959 figures included the operations of Bud Berman Sportswear which was sold in December of 1959.

The company reports that its foreign licensees are producing at a 15% higher rate that in 1959. The downward trend of its Sanforized operation was reversed this year, the company reports.

Cluett, Peabody will expand the capacity of its clothing manufacturing subsidiary, J. Schoeneman Inc. and its Canadian plant. The company is considering diversifying into the women's wear field but no definite plans have been made.

The Louis P. Batson Co. Named Frankl Sales Agents

The Louis P. Batson Co., Greenville, S. C., has been named Southern sales agent for Ernest L. Frankl Associates Inc. of New York.

The Frankl firm, an importer, represents eight textile machinery manufacturers through Europe, including Germany, Holland, Italy, Sweden and Switzerland.

European textile firms whose products Batson will be selling under the sales agreement with Ernest L. Frankl Associates include Jakob Jaeggli of Winterthur, Switzerland, manufacturer of skein mercerizing machines and hydraulic jacks; Jakob Muller, Frick, Switzerland, narrow fabric looms; Svetema, Gothenburg, Sweden, producer of dyeing and finishing machinery including the Pad-Roll dyeing and bleaching ranges; Tattersall & Holdsworth's, Enschede, Holland, dyeing and finishing machinery; Trutzschler & Co. of Rheydt-Odenkirchen, Germany, manufacturer of cotton opening equipment; and Felten & Guilleaume of Koeln-Muelheim, Germany, twin wire heddles and loom supplies.

Batson will handle the Southern sales of Ernest L. Frankl Associates from its headquarters in Greenville and through branch operations in Spartanburg, S. C.; Raleigh, Charlotte and Greensboro, N. C.; and in Atlanta and LaGrange, Ga.

Sjostrom Machine Co. Adds 7,000 Square Feet To Plant

Some 7,000 square feet of manufacturing space has recently been added to the existing plant of Sjostrom Machine Co. in Boca Raton, Fla.

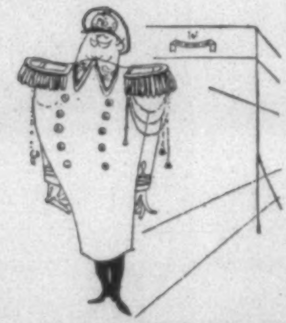
New machine tools have been installed and the company now has nearly 20,000 square feet of manufacturing space, plus an electronic division occupying 1,800 square feet. A total of 16 engineers and employees are at work in Boca Raton and branch offices.

The Sjostrom company, long established in Lawrence, Mass., moved to Boca Raton in 1954. The company produces special textile machinery.

Industrial Rayon Sells Covington, Va., Facility

Industrial Rayon Corp., Cleveland, Ohio, is terminating operations in its rayon and nylon plants at Covington, Va. As part of a program of regrouping its facilities in an effort to eliminate losses, the company will consolidate its rayon textile yarn operations at its large modern facility in Painesville, Ohio.

The company's facilities at Covington have been sold to Hercules Powder Co. which intends to convert the present nylon plant to the production of polypropylene fibers. Albert E. Forster, Hercules president, stated that when the nylon plant is converted and expanded, it will have an annual capacity in excess of 10 million pounds of polypropylene staple fiber and continuous multifilament yarns. The polypropylene fiber will be used in connection with expanding development activities in finding new markets for the basic resin which Hercules produces. Forster said the company



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has no plans for entering the nylon or rayon business.

Frederick L. Bissinger, president of Industrial Rayon, said that the concentration of the rayon-producing operations at Painesville will permit more efficient operations and will place the company in a better position to serve the needs of its customers in the tire and textile yarn fields.

O-M Spinning Merges With Osaka Machine Mfg. Co.

O-M Spinning Machine Mfg. Co. of Osaka, Japan, has merged with The Osaka Machine Mfg. Co. O-M announces that it has taken over all the assets and liabilities of Osaka and has changed its name to O-M Ltd.

The two firms have long been sister companies engaged in the manufacturing of spinning and drawing equipment for cotton, synthetic and wool fibers. O-M Ltd. will continue to be represented in the U. S. by Edward S. Rudnick & Associates, New Bedford, Mass.

Court Permits Maremont To Retain Saco-Lowell Stock

As a result of a recent Federal district court decree, Maremont Automotive Products Inc., Chicago, Ill., will be allowed to retain its majority stock ownership of Saco-Lowell Shops.

However, Maremont has been directed to sell the machinery and equipment used by Saco-Lowell in the production of automotive mufflers. In an earlier anti-trust suit the government had asked that Maremont be ordered to divest itself of all Saco-Lowell stock.

Auto mufflers produced by Saco-Lowell accounted for 3% of its sales of $29 million for the nine months ended August 31. All other operations of Saco-Lowell are unaffected by the order.

Air Reduction Consolidates Three Chemical Divisions

All activities of Air Reduction Co., New York City, in the industrial chemical field are to be consolidated into a single operating unit, according to the company. The three chemical divisions, Air Reduction Chemical Co., Colton Chemical Co. and National Carbide Co., have been consolidated into a new division known as Air Reduction Chemical & Carbide Co.

Air Reduction believes that the consolidation will improve the company's effectiveness in the industrial chemical field by providing a stronger competitive front, greatly increased marketing strength, and more effective co-ordination of its activities. The sale of polyvinyl acetate emulsions will continue to be handled by the Colton polymers department. Vinyl monomers and other acetylene chemicals will be marketed by the organic chemicals department. Both departments will market Vinol polyvinyl alcohol.

The consolidation should be completed by the year's end.

Draper Corp. Holds First Open House In Ten Years

Draper Corp.'s Hopedale, Mass., plant held an open house recently for the first time in ten years. The exhibition included displays of wares and manufacturing techniques used in the plant along with the machinery that was presented at the Greenville, S. C., exhibition. Approximately 21,000 people attended with some coming from as far away as 20 miles.

Because of the equipment at the open house, the three night exhibitions drew a number of top officials and key personnel from various firms throughout New England.

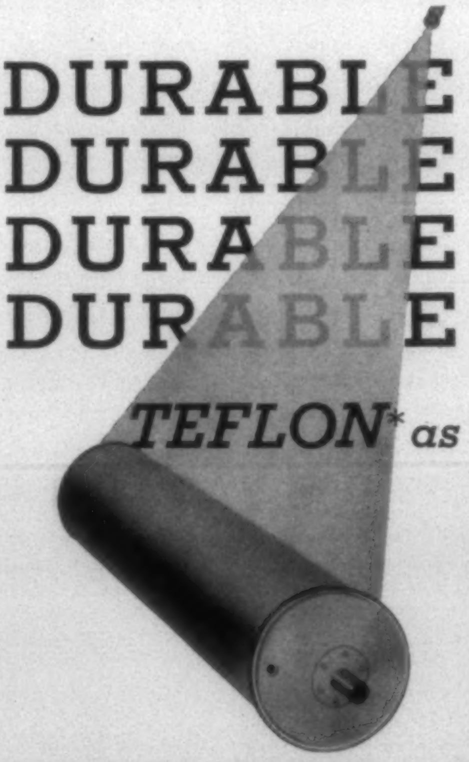
Guided tours were conducted throughout the plant facilities.

West

Thomas H. West, Draper's president, Hopedale, Mass., reports that the company's business continues to be good during the third quarter with both sales and earnings showing increases over last year. Although Draper does not release quarterly figures, West indicated that sales for the third quarter were up 15% over the comparable period of 1959.

Commenting on estimated results for the year, he said that consolidated net sales should be over $60 million, an increase of nearly 20% from the 1959 sales of $51.2 million. On the basis of the earnings trend to date, the profit for the year is estimated to be in the area of $2.85 per share, which would be a 55% increase over the 1959 figure of $1.84.

The company's backlog of orders for



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conventional looms was reported to be ahead of last year, although the slowing down of activity in the textile industry has affected incoming new orders. Current production of 800 to 1,000 looms per month of all types is scheduled into the second quarter of 1961. West pointed out that customer inquiries, which historically are an indication of future business, continue to be received in good volume.

Polymer Industries Agent For Hercules Warp Size

The appointment of Polymer Industries as a sales agent for CMC warp size has been announced by Hercules Powder Co., Wilmington, Del.

Polymer will act as agent for CMC warp size to the synthetic fiber, wool and synthetic fiber-wool blends segments of the textile industry. Polymer Industries' specialized experience in this part of the textile industry will enable it to assist textile mills in using the size, Hercules reports.

Southern Machine Co. Sold By Singer For $250,000

Singer Mfg. Co. has sold Southern Machine Co., Chattanooga, Tenn., to a group of the firm's management for $250,000. Purchasing the company were Joe Cobble, president; J. A. Cobble Sr., executive vice-president and secretary; R. L. Green, vice-president and general manager; and R. H. Green, vice-president.

Southern Machine, which was founded in 1952, was sold to Cobble Bros. Machinery Co., Chattanooga, last April by R. L. Green. Cobble then sold its own business and that of Southern to Singer Mfg. a month later. The new company was named Singer-Cobble. Singer's purchase of Cobble marked its entry into the tufting machinery business.

Southern, which has a 20,000-square-foot plant in Chattanooga, produces machines with as many as 1,380 needles which range in price up to more than $50,000.

In disclosing the purchase, R. L. Green said, "We have developed plans for the stronger promotion of our products and have adopted a progressive attitude toward new developments in the tufting machinery field. Long-range plans are to expand our facilities, adding to our building and equipment, and to eventually double employment at the plant."

New Chemstrand Facility Being Built At Decatur, Ala.

A new technical center at The Chemstrand Corp.'s Decatur, Ala., location will be ready for occupancy by late January 1961, the company reports.

The new center will be permanent headquarters for the corporation's engineering and development department, applications research and service department, and other groups closely associated with these activities. The center will provide expanded facilities and office space for these corporate activities.

Chemstrand manufactures Acrilan acrylic fiber at its Decatur, Ala., plant. It operates nylon plants at Pensacola, Fla., and Greenwood, S. C. Chemstrand Research Center Inc., a subsidiary, is located at Durham, N. C.

Special Campaign Planned For Du Pont Carpet Nylon

The Du Pont Co. will launch a special Spring campaign pushing its 501 carpet nylon. More than 8,000 department, furniture and floor-covering specialty stores are planning to participate in the program. Du Pont describes the campaign as "the most far-reaching campaign for the carpet fiber since its introduction two years ago."

Seven carpet mills will be co-ordinating activities in a broad campaign which will carry through the entire Spring season with major concentration in March. The mills are: Barwick Mills, Bigelow, Cabin Crafts, James Lees, Monarch, Alexander Smith and Wunda Weave.

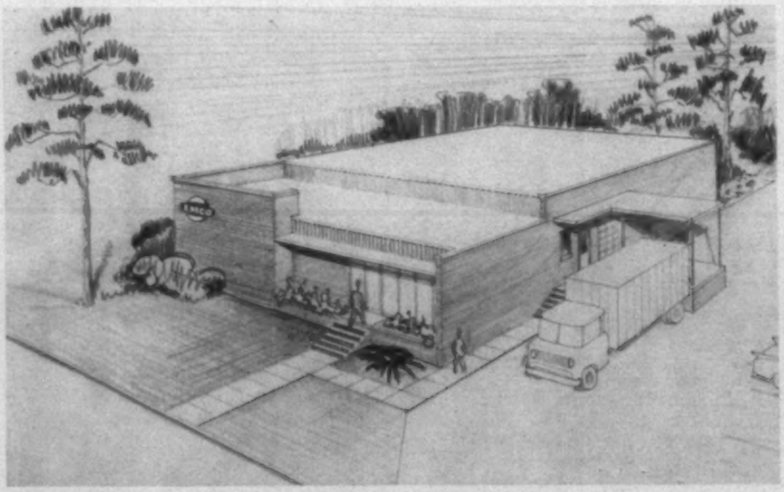
The program will include television commercials, full-color ads in major shelter magazines and newspaper supplements. A full-line of point-of-sale materials will be made available by Du Pont.

Warner & Swasey Net Off 37% In First Nine Months

Warner & Swasey reports that its net income for the first nine months of the current fiscal year was $2.2 million, a 37% drop from the $3.4 million income in the first nine months of 1959. Shipments and revenue from machine rentals totalled $44.4 million, an increase of 6% from the $42 million in the comparable period of last year. The figures for 1959 include the consolidation of Sterling Foundry Co. for comparison purposes.

Walter K. Bailey, president, reported that operations for the third quarter were at a much lower level than in the first half of the year, resulting from a greatly reduced level of orders which began in March and continued through August.

The order backlog, which reached its lowest point in August has increased to over $14 million. "This assures considerably better shipments and profit in the fourth quarter than in the third," Bailey said.



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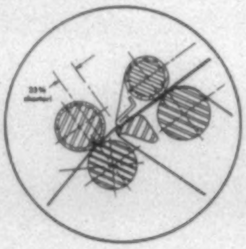

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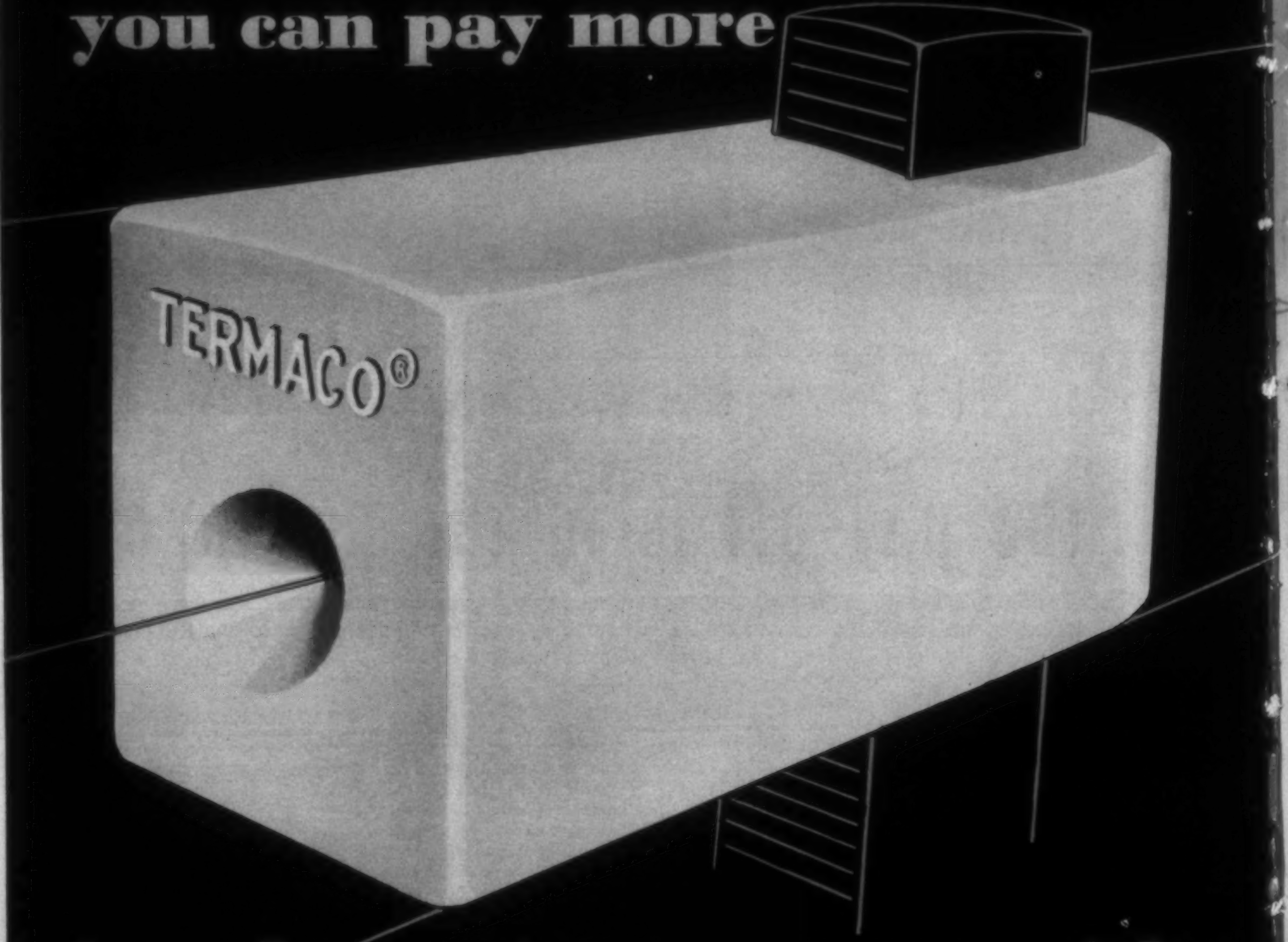

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textile bulletin

VOL. 87 JANUARY 1961 NO. 1

A Look At The 1960-61 Cotton Crop

MILLS CAN ANTICIPATE LOWER YARN STRENGTHS, MORE ENDS-DOWN AND MORE WARP BREAKS FROM THE CURRENT CROP; MORE CAREFUL BLENDING WILL BE A NECESSITY

By **EARL E. BERKLEY**
and S. C. MAYNE JR.*

SPINNING quality of cotton may be defined as that combination of fiber properties, cleanliness and color that will enable the manufacturer to produce a suitable yarn for a specific product at a cost permitting a profit. Spinning quality, therefore, is related to the degree of perfection required in the yarn, the limitations of the mill equipment, the capability of the personnel in the mill organization, and the cost. The ideal cotton for any product would appear to be that which would enable the mill to meet competition and yield a maximum profit.

Fiber Characteristics

Fiber length is the major factor in limiting the yarn number, but it is influenced by fiber strength and particularly by fiber fineness. Suppose one is making a 40s yarn from $1\frac{1}{16}$-inch cotton with a Micronaire reading of 4.2 and a Pressley of 80. This cotton should produce a yarn with a break factor of about 1800. If that cotton should be replaced with one of lower fiber strength, the yarn strength will decrease and the number of ends-down will increase, particularly if the fiber strength drops below 75. An increase in fiber strength may increase the break factor, but it may also decrease the yarn elongation and increase yarn end breakage and other troubles.

If Micronaire readings are lowered, the diameter of the yarn will increase, the twist will become more effective, and the break factor will change. The yarn strength will increase when finer fiber is added if the twist multiplier used is lower than that required for optimum yarn strength; but when spinning warp yarns with high twist, the break factor may decrease. This relationship holds true down to about 3.0 on the Micronaire scale for upland type cottons. Certain fine barbadence type cottons (down to a 2.6 Micronaire) having small diameters may produce stronger yarns from coarser cottons; but, in general, fiber breakage during processing more than counterbalances the advantages of fiber fineness in the range below 3.0.

This can be explained in part because as the Micronaire readings are increased, the yarn becomes smaller in effective diameter, and the twist multiplier must be increased to maintain the same break factor. There is a limit to the amount of coarseness that can be compensated for by greater twist, perhaps 0.3 (Micronaire reading), but certainly not more than 0.5. This factor is in urgent need of a careful study.

Let us assume that 40s yarn is about the top limit that can be spun economically from an average $1\frac{1}{16}$-inch cotton except for specialty fabrics. An average cotton would be about 80 in Pressley strength and 4.2 in Micronaire reading. How can one maintain the required break factor and nominal ends-down as the fiber properties change? Assume that fiber strength remains about constant and the Micronaire readings are higher than average, as is the case this year. The break factor can be controlled within limits by increasing the length of the cotton, the twist, and the fiber strength—all of which cost money. A better way to maintain the required break factor is to reduce the average Micronaire readings of the cotton used in each mix by adding bales that have below average Micronaire readings. In this way the yarn strength, ends-down, yarn diameters, elongation, twist and front roll speeds can all be controlled without added cost; whereas, by any other means certain of these factors, particularly the cost, will increase. The added cost of weaving alone, when unusually coarse cotton is used, will no doubt pay for a $\frac{1}{16}$-inch increase in staple length. Care should be used this year to keep the Micronaire average of

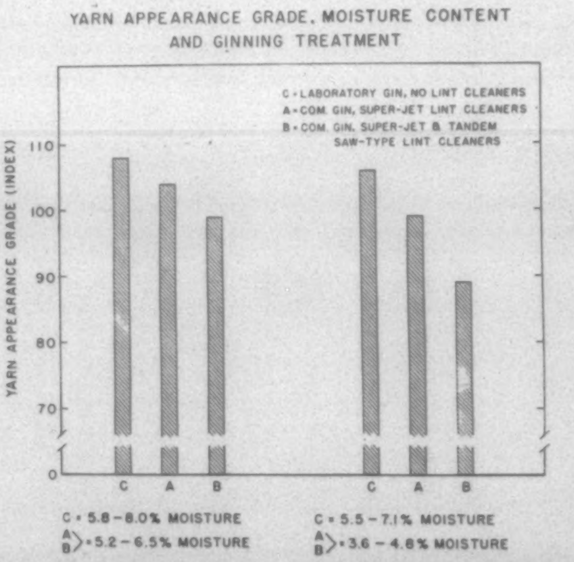

Fig. 1—Yarn appearance grade, moisture content and ginning treatment.

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*Anderson, Clayton & Co., Houston, Tex. Presented by Dr. Berkley before the Eastern Carolina Division of the Southern Textile Association, Raleigh, N. C.

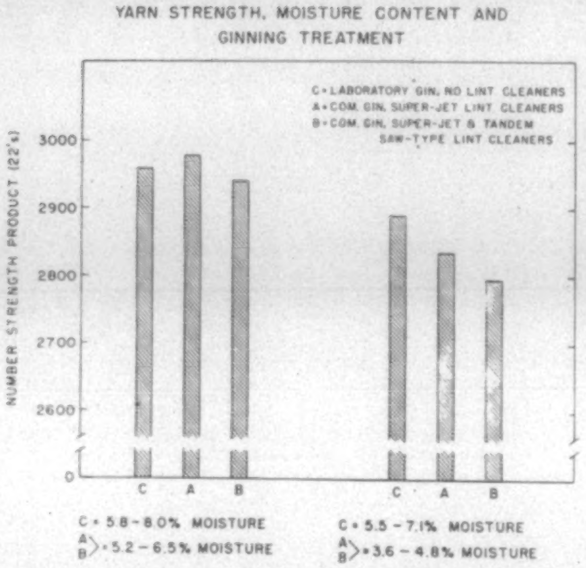

Fig. 2—Yarn strength, moisture content and ginning treatment.

each mix low enough from day to day to control ends-down and yarn strength.

The question is, "How much fiber length must be added to compensate for each 0.1 increase in Micronaire reading above 4.2 in order to maintain yarn strength and to avoid an increase in operating costs caused by ends-down in case fine cotton is not available?" An estimate based on the data available would indicate that about $\frac{1}{32}$-inch per 0.3 increase in Micronaire reading up to 4.5 should be added, perhaps another $\frac{1}{32}$-inch for the next 0.25, and an ever-increasing amount of length for each 0.1 increase in Micronaire reading thereafter. Webb's formula indicates that at least $\frac{1}{32}$-inch must be added for each 0.5 increase in Micronaire reading above 4.2.

The role of fiber fineness in spinning, weaving and finishing is gradually unfolding, and it is quite evident now that changes in Micronaire readings influence each and every step in processing cotton. Very coarse cottons are excellent for knitting yarns, for filling in napped blankets, for certain apparel fabrics, and in blends with wool and man-made fibers; but they must be spun with care for the best results. Fine fiber is the work horse of cotton textiles; medium fineness bridges the entire field and requires fewer adjustments and less supervision in spinning, weaving and finishing.

Before discussing the current crop in detail, I would like to develop a background of understanding in regard to the treatments that cotton receives in harvesting, ginning and manufacturing that influence yarn and fabric quality. It is well understood by all, I believe, that cotton production in the U. S. is limited by the technical developments in production through ginning, or what is commonly known as mechanization. Without mechanization we are compelled to delegate cotton growing to areas of low cost labor where factory jobs are not competing for the labor. In mechanization, all phases of production influence the quality of the fiber, particularly the amount of water applied in the irrigated region or the amount of rain received in the rain belt. Of essentially the same importance is the time during the growing and harvesting season that water is applied to the soil.

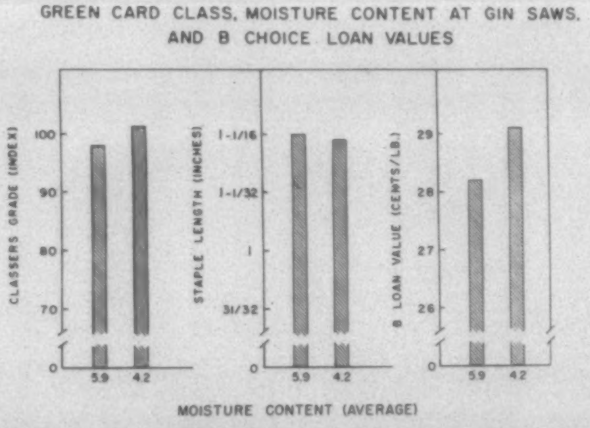

Fig. 3—Green card class, moisture content at gin saws, and B choice loan values.

Fiber quality consists of a combination of length, strength and fineness and the changes in them caused by field damage and handling treatments. Essentially 45% of the American cotton crop is now harvested by means of spindle pickers or strippers. Another 18% is snapped; i. e., the entire boll including the seed cotton and the bur is harvested and brought to the gin to be separated in bur extractors before ginning. Hand-snapped and machine-harvested cotton makes up roughly 60 to 65% of the U. S. cotton crop. The balance of the crop is hand picked, but the percentage of leaf trash and grass found in hand-picked cotton today is almost equal to that collected by the spindle picker when it is properly operated.

Dryer Damage

If the hand-picked cotton is being ginned at the same gin as the spindle-picked cotton, the hand-picked cotton is subject to damage in the dryer, which is a handicap not fully recognized by all of the industry. Essentially all gins today are equipped with dryers. If the temperature used in drying is regulated to gin the spindle-picked cotton, which has anywhere from 8 to 12% or more moisture, it is very difficult to re-adjust the temperature to gin a trailerload of hand-picked cotton and then re-adjust it back to gin the machine-picked cotton. The farmers in most areas refuse to permit the ginners to arrange the trailers so that the hand-picked cotton can be ginned for a while and then the machine-picked cotton, due to the demand for trailers. If the ginner is able to furnish the farmer with extra trailers to maintain his harvesting, he can segregate the hand-picked and the machine-picked cotton. This is understandable because the farmer is compelled to keep his hands busy or he will lose them.

Research shows that cotton ginned in properly equipped and operated gins receives very little damage in the form of broken fibers if the moisture content is kept at approximately 7%. If, however, the moisture content is lowered, fiber breakage increases; and if it goes down below 5%, the fiber breakage may be severe. It has also been announced by the Stanford Research Institute that chemical disintegration of cotton fibers occurs at elevated temperatures when moisture drops below 5%. It is also understood that the classer's grade, as currently determined, increases with good ginning as the moisture goes down to approximately 5% or even lower.

Unfortunately the cotton classers have had some difficulty in associating the feltlike appearance of the samples caused by the more elaborate ginning system with poor preparation. They were trained to recognize preparation as roughness of the sample, not as relating to the presence of neps, seedcoat fragments and other things that go along with poor yarn quality. In other words, the type of preparation associated with ginning during the days when cotton was all hand picked no longer exists with our modern type of ginning. We have moved completely out of that range, and a bale of cotton having what used to be considered good preparation now looks rough compared with the feltlike appearance of current ginning.

Our experience indicates that if you were to select the samples having the roughest preparation in any lot of cotton today, you would find the best spinning quality in that lot. The rough preparation indicates that the samples were ginned with adequate moisture content. According to the studies made in the Acco Laboratory, overdrying is the most important single factor in our current ginning process. If we gin machine-harvested cotton on a simple Eli Whitney type gin with no cleaning or drying at elevated temperatures, we obtain high yarn appearance grades (Fig. 1) with good yarn strengths (Fig. 2). If we gin the cotton on current ginning equipment using the overhead cleaners but without drying below 6% and use the Super-Jet Lint Cleaner, we can also obtain good fiber quality from the point of view of yarn strength and yarn appearance grades (see Figs. 1 and 2). If, however, we dry the cotton below 5%, the yarn appearance and yarn strength are both lowered appreciably. If we use the saw-type lint cleaners at moisture contents above 6%, there is very little reduction in yarn strength and yarn appearance; but if we dry the cotton below 5% moisture and utilize all the conventional gin equipment including the saw-type lint cleaners, both yarn appearance and yarn strength decrease appreciably.

Classer's Grade

Harvesting and ginning influence the fiber quality, but they influence the classer's grade even more. The bales that were ginned on a laboratory gin had a classer's grade of SLM. Those ginned on a commercial gin at about 6% moisture had a SLM+ grade, averaging 98 in grade index; and those that were ginned on the commercial gin at about 4.0 moisture and with the saw-type lint cleaner had a grade of M+, or about 102 in grade index (Fig. 3). The green card class showed only one bale of $1\frac{1}{32}$-inch staple length when the dryer and the saw-type lint cleaner were used. The balance were $1\frac{1}{16}$-inch including the moist samples. However, the commercial classers did differentiate between the bales ginned dry and those ginned with 6% moisture. The staple length was less when the cotton was overdried.

The major factor that can be measured in a laboratory and which seems to change most with the type of ginning is the percentage of short fibers. Short fibers in American cottons originate from several sources:

(1) poor seed;
(2) irregular growing conditions, i. e., poor spots in the field;
(3) microbiological decay in the first bolls to open on large plants where they are shaded and where irrigation is continued after the bolls open;
(4) insect damage;
(5) diseases; and
(6) harvesting and ginning.

By using a control—i. e., cotton ginned on a laboratory gin without cleaning equipment—a comparison was made between cottons receiving different treatments. We measured the short fibers on the sorter using the short array method and taking the break at the $\frac{7}{16}$-inch point so that the percentage of fibers shorter than one-half inch was determined. The percentage of short fibers increased as we increased the degree of drying and particularly when we used the saw-type lint cleaner on the dry cotton. The percentage of short fibers cannot be readily detected by appearance, and it is expensive to measure them on conventional testing equipment. The spinning test is the only reliable measure so far of the changes in quality in ginned samples of this type.

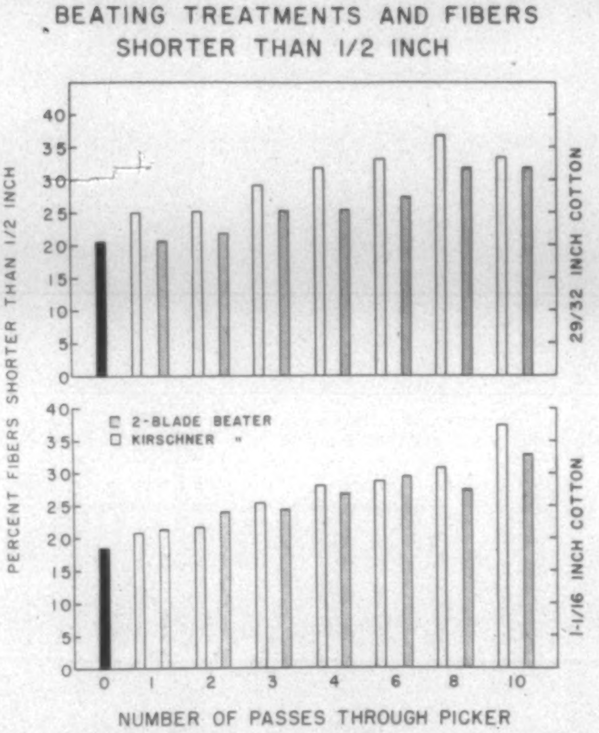

Fig. 4—Beating treatments and fibers shorter than one-half inch.

Anderson, Clayton & Co. has made every attempt to reduce the degree of drying in the gins this year, and we hope that

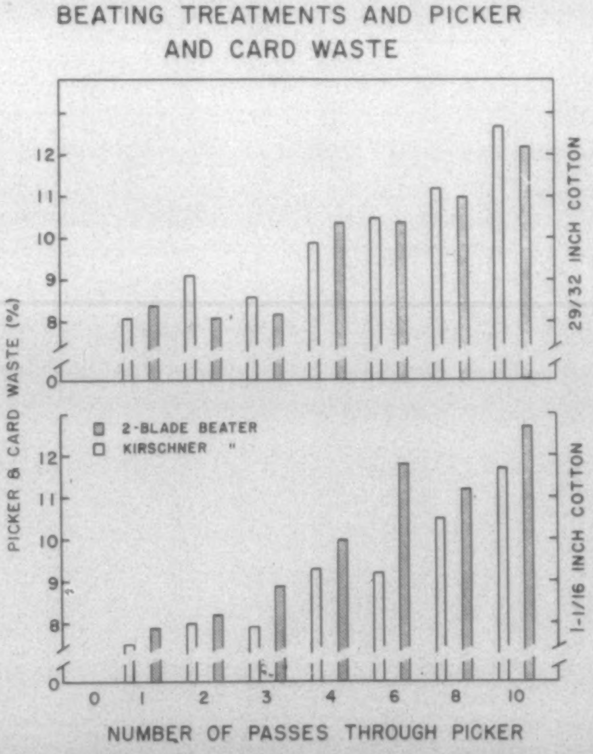

Fig. 5—Beating treatments and picker card waste.

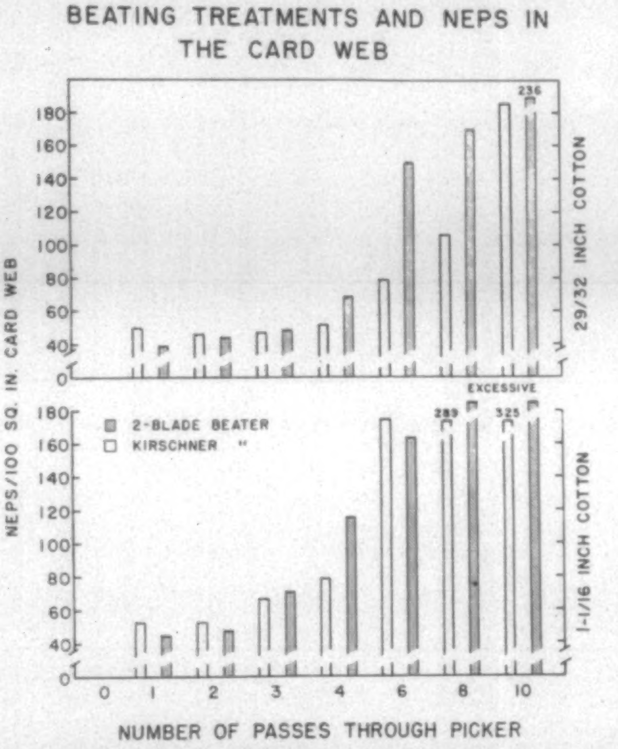

Fig. 6—Beating treatments and neps in the card web.

our ginners will keep the moisture up to 6% where it is at all possible. We realize, however, that when cotton must be put in the loan that grade is the most important single factor. Our ginners, therefore, cannot take a chance on reducing the farmer's income unless we can assure him that the price of the cotton will not be decreased. Only when we have sold the cotton prior to ginning can we do so.

In working with a number of our mill customers, we have learned that not everyone is entirely satisfied with the cleaning equipment being used in the cotton mills. In the past two or three years we have been asked by many mill customers about the effect of different mill treatments on the fiber. The most critical single treatment in a cotton mill appears to be the beating treatment, particularly beating treatments where the cotton is held by a feed roll such as in the picker.

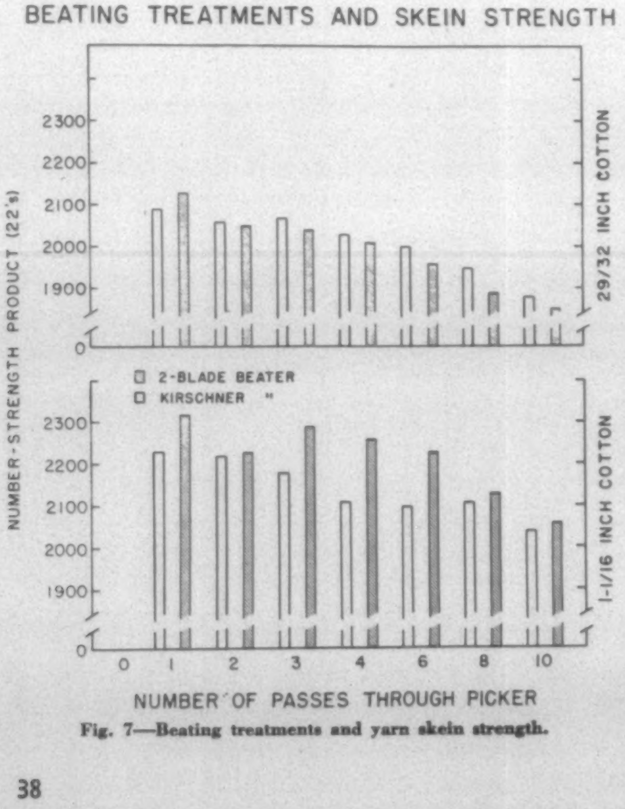

Fig. 7—Beating treatments and yarn skein strength.

About a year ago we ran a study repeating the beating treatment and the treatment in the S.R.R.L. Opener-Blender-Cleaner and the Super-Jet Cleaner on the same cotton. We found in that study that the picker with a Kirschner beater caused more breakage of fibers, increased the picker and card waste, and reduced the yarn strength and yarn appearance more than any other treatment used. We have recently repeated this picker study using both the Kirschner beater and the two-blade beater. In this study we ran the cotton through the picker up to ten times and then measured the various fiber properties and the spinning quality after each of the first two successive treatments thereafter—i. e., after 1, 2, 3, 4, 6, 8 and 10 treatments. In this study we found that the blade beater causes slightly more damage than the Kirschner beater. The percentage of fibers shorter than one-half inch (Fig. 4), the picker and card waste (Fig. 5), and the number of neps (Fig. 6) all increased with an increased number of treatments; whereas the yarn strength (Fig. 7) and yarn appearance grade (Fig. 8) decreased.

When comparing the non-lint content with the picker and card waste, it was found that the non-lint content decreased with the first and the second treatments, whereas the picker and card waste continued to increase throughout the range of beating treatments for both the $\frac{29}{32}$-inch and $1\frac{1}{16}$-inch cottons (Figs. 9 and 10). Similarly the upper-half-mean length changed very little, if any; whereas, the percentage of short fibers increased appreciably (Figs. 11 and 12). You can understand why a classer might miss the percentage of short fibers in a given sample of cotton if the Fibrograph upper-half-mean length does not show it. This was true for both the blade and the Kirschner beater.

Assuming that classer's grade will continue to be the major pricing factor in buying and selling cotton, it is understandable why the industry may have to contend with more fiber damage in American cotton than is desirable. One of the first questions asked of us in the laboratory is what can be done in a mill to process the fiber already bought this year—with all of its shortcomings. Since we are discussing the current crop, let's see what the major limitations might be.

Coarser Than Usual

The current crop, with rare exceptions in a few areas of Texas, is coarser than usual. It is particularly coarse in the Mississippi Valley, Arizona and California. The early harvested cotton in the Southeast was somewhat stronger than last year; but the trend in the later harvested cotton is downward, and it would appear that the average strength for the season will be somewhere between 75 and 78. In the Mississippi Valley the strength of the fiber is slightly higher than last year and should average 80 or better. In Texas it will average between 80 and 82, going as high as 85 in some places. Fiber strength in Arizona and California is excellent. The longer staple cottons in El Paso are somewhat coarser than average, which is an advantage since Acala 1517 cotton is inclined to be somewhat finer than many of our mills like. The fiber length, as measured in the Acco Laboratory, is slightly less this year (Table I Page 40). The staple lengths, accord-

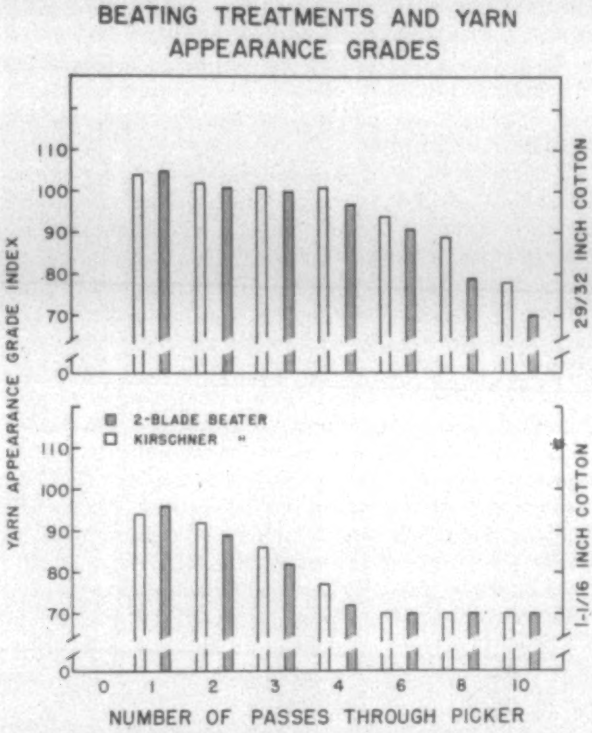

Fig. 8—Beating treatments and yarn appearance grade.

ing to the U. S. Department of Agriculture report "Cotton Fiber and Processing Test Results, Crop of 1960," is slightly higher for certain areas than last year. Acco data indicate that the number-strength product at the level of 22s yarn is lower and the yarn appearance grades are about the same in most areas, but slightly lower in the Southeast and in the Rio Grande Valley. They should be better in the irrigated region due to the coarse fiber.

The mills should anticipate lower yarn strengths with more ends-down, more warp breaks and more loom stops, on the average. It will be necessary to blend the cotton more carefully for fiber fineness and to make purchases more specifically than for any crop since 1952. With the reduction in mill margins and the shortage of low grades, particularly with the

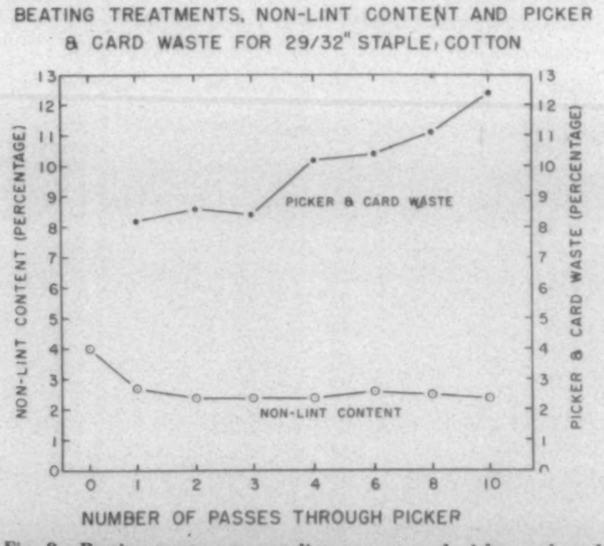

Fig. 9—Beating treatments, non-lint content, and picker and card waste for 29/32-inch staple cotton.

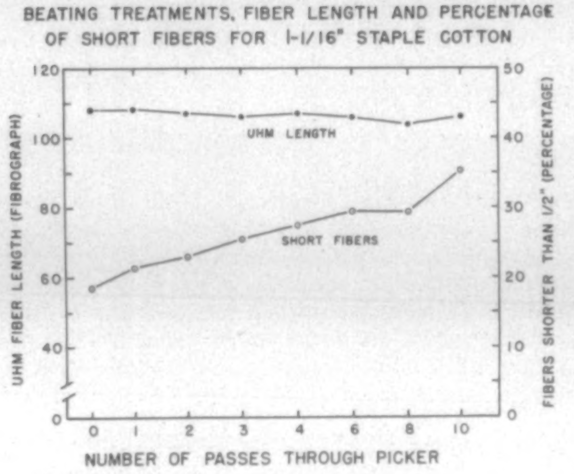

Fig. 10—Beating treatments, non-lint content, and picker and card waste for 1-1/16-inch staple cotton.

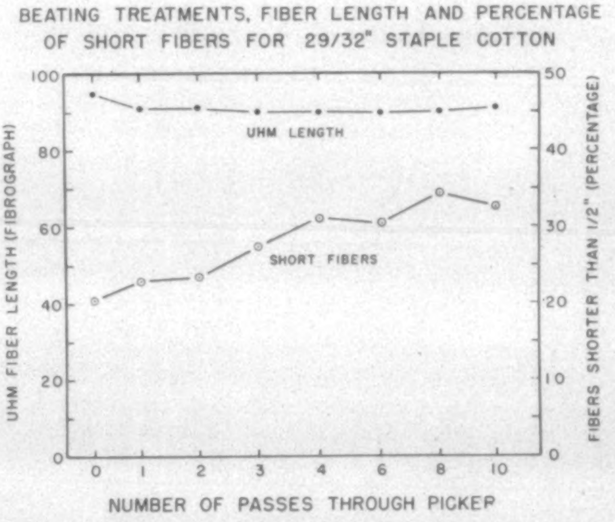

Fig. 11—Beating treatments, fiber length and percentage of short fibers for 29/32-inch staple cotton.

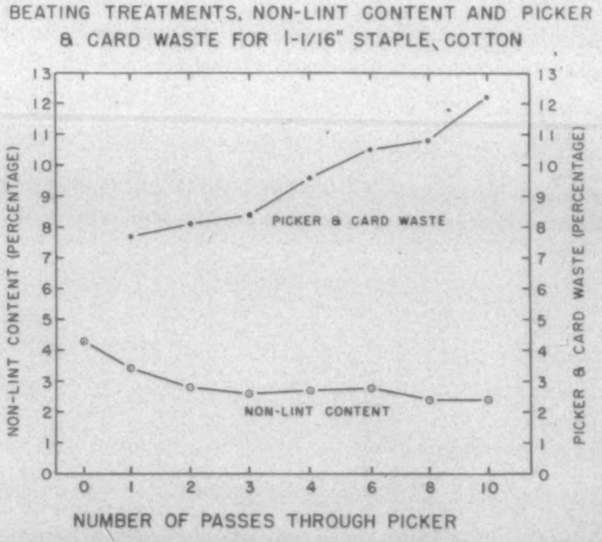

Fig. 12—Beating treatments, fiber length and percentage of short fibers for 1-1/16-inch staple cotton.

limited amount of fine cotton of the desired grades and staple lengths, many mills will obtain their full supplies without providing for the necessary balance and will pay more for the cotton due to the increased production costs than they anticipate. These are things that you can look forward to in this crop year.

It is difficult to tell a mill how to utilize the cotton it has already bought without adding to its costs. The increase in Micronaire readings can be compensated for in four ways.

The simplest way is to blend in fine fiber to bring the Micronaire reading down to approximately 4.2. This method will not only avoid increased fiber costs, but it will prevent changing mill settings. It should be possible for mills which have not made all of their purchases to date to obtain some fine fiber. This is the only method I can suggest that will avoid an increase in cost.

For the first 0.3 of a Micronaire reading above 4.2, it now appears you should add $\frac{1}{32}$-inch in staple length when spinning yarns near the limit for the staples used (say, 40s yarn from $1\frac{1}{16}$-inch cotton) in order to maintain the desired yarn strength and operating performance in the mill.

Increase The Twist

You may also compensate for this added coarseness by increasing the twist for certain types of yarn. If you have already twisted the yarn to its maximum strength, this of course will not be of any advantage. Additional twist is more likely to give you relief in filling yarns than in warp yarns, and this, too, costs money.

You may also add fiber strength by purchasing stronger cottons. This may compensate for the first 0.3 in Micronaire reading for many constructions. This, however, will also cost money, particularly if mills in general seek to obtain quantities of strong cotton.

The second best way to compensate for coarse fibers is to reduce the beating treatments in the mill and, in fact, all handling treatments, thus retaining the fiber length. This, too, will show a profit, but is limited by the grades bought and the construction being manufactured.

Since the presence of short fibers in our current ginnings is a major factor in yarn uniformity and, therefore, yarn appearance, this antidote—i. e., reducing the beating treatments in the mill to a bare minimum—will be welcomed by the finishers. You cannot change the cotton that you receive from the current crop. You may tell the ginner that you don't like it; but unless you are willing to pay the farmer to do it differently, he will seek to obtain the maximum income from his efforts, based to some extent at least on loan values and using the equipment and methods available. You will have to make the best of the raw material you purchase by varying the mill procedures.

It is only in the mill, therefore, that you can make any significant changes now at this late date, and we have proved beyond a shadow of a doubt that each and every mechanical treatment reduces the effective fiber length and increases the waste. It also reduces the yarn appearance grade and the yarn strength. If you can obtain maximum yarn strength and yarn appearance with a minimum of mill treatments, it appears to be foolish to do more than the absolute minimum in your manufacturing system. This minimum, of course, depends upon the cotton you purchase. If you are using SM cotton, all it needs is to be blended and put in the form of a picker lap. It should be opened as gently as possible, blended with as little beating treatment as necessary, and processed in a picker with only one beater. The data that we have shown you indicate that the Kirschner beater does slightly less damage than the blade beater on certain cottons but more on others, so there is not too much choice.

Pin Trash

The so-called pin trash in the high grade cotton, particularly M and SM grades, is primarily seedcoat fragments to which fibers are attached. These fragments cannot all be removed by any mechanical treatments; and, as stated above, it is desirable to avoid essentially all beating treatments which were formerly used to remove leaf trash. The best way to remove the seedcoat fragments is in an alkali boil in the yarn or in the fabric. For grades below M, i. e., SLM and lower, it is necessary to do some cleaning in the mill; but it is not necessary to subject the cotton to multiple beating treatments. In fact, we can make an "A" quality yarn out of SGO or even lower grades which have good fiber quality by passing the cotton through a simple opener followed by a Super-Jet Cleaner, a S.R.R.L. Opener-Blender-Cleaner, and a finisher picker with one beater. If we add to this line of cleaning by duplicating any of the treatments, we reduce the yarn strength and yarn appearance.

We are not advertising the Super-Jet Cleaner and the S.R.R.L. Opener-Blender-Cleaner; but we use them because the Super-Jet removes the heavy particles, including motes, that

Table I: Fiber And Spinning Data From The 1959 And 1960 Crops, By Areas

Crop Years	Area	No. of Obs.	UHM Length (Fibrograph)*	Fiber Strength (Pressley)*	Fiber Fineness (Micronaire)*	Number-Strength Product (22s)	Yarn Appearance Grade (Index)
1959	Atlanta	10	1.15	82	4.4	2590	102
1960	Atlanta	5	1.07	79	4.3	2370	96
1959	Memphis	13	1.14	81	4.2	2480	99
1960	Memphis	13	1.06	83	4.6	2390	99
1959	New Orleans	11	1.13	81	4.6	2520	102
1960	New Orleans	3	1.07	80	5.0	2380	101
1959	Rio Grande Valley	2	1.18	79	4.2	2580	98
1960	Rio Grande Valley	3	1.00	79	4.0	2320	94
1959	Arizona	5	1.08	83	4.2	2620	75
1960	Arizona	7	1.07	89	4.3	2740	91

*Obtained from card web

are destructive to the card clothing. If the cotton is opened first, the blender produces a relatively uniform sample that does not require special blending in the processing system. We, unfortunately, have to use two beating treatments when we process five-pound and small samples in order to obtain a usable picker lap. With such small samples it is difficult to adjust the picker to obtain a satisfactory lap before the sample has been processed. In running larger samples, however, it has been our experience, as shown in the figures, that the yarn strength and yarn appearance are best when we only use one beating treatment in the picker.

The American cotton industry is in a transition stage, and it does not behoove any phase of the industry to belittle the efforts of other phases. Although we may not like the condition of the cotton produced under mechanization, we do like the price at which it can be supplied. The producer does not intentionally degrade his raw materials. He simply attempts to get a maximum income from his efforts. It puts a responsibility on the merchandising and manufacturing phases of the industry, therefore, to price the cotton in such a way that the producer can supply the raw material needed and still maintain his level of income. This is not easy, as we will all agree, due to changes that are required from our conventional system. You simply cannot expect a producer to be happy with SLM grades if all bales are priced as if they had the customary field damage characteristic of the old type SLM. If we know how to price the cotton on the basis of quality, we do not yet have the means of making the change; otherwise, it would be done. This change must be made gradually as we learn the steps and can develop the necessary equipment.

Each and everyone of you should assume that anything that makes cotton's position stronger in your mill makes your position more secure. Any information you can give your merchant that will help him to put the price of your supplies on the correct factor will be an advantage to the industry as a whole and to you as a cotton buyer. If it means the use of testing instruments to supplement your classing, then you should use these instruments; but beware that you use them correctly, because any incorrect data can be dangerous not only for you as an individual but for the industry as a whole. Careless or malicious use of laboratory data is a means of giving your job and your industry to the cotton-growing areas where hand labor is still plentiful, or to the man-made fiber industry.

National Cotton Council Plans Memphis Meeting For January 30-31

The National Cotton Council meets in Memphis, Tenn., January 30-31 for its 23rd annual meeting. More than 1,000 leaders of the cotton industry representing the 18 cotton producing states and six branches of the industry are expected to attend.

Producers, ginners, merchants, warehousemen, cottonseed crushers and spinners will review the 1960 activities of the council and approve recommendations for the coming year. Delegates will hear reports on programs in the field of production and marketing, utilization research, sales promotion, and foreign trade.

Detailed recommendations will be submitted on activities designed to lower costs in producing, processing, marketing and manufacturing cotton, cottonseed and their products and to improve quality. Other recommendations will be concerned with sales promotion of cotton products domestically and abroad.

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How Effective Are Your Supervisory Meetings?

ARE THEY ADEQUATELY PLANNED AND WELL CONDUCTED? ARE THEY BRIEF? ARE THEY CALLED FOR GOOD REASONS?

By **LARSTON D. FARRAR**

MANAGEMENT men constantly must make decisions about meetings. The larger the company, the more meetings must be held. This includes meetings inside the company as well as meetings outside the company.

Meetings inside the company may be for many purposes. Some of these include:

(1) Changes in organization structure that must be explained clearly down to the last detail;

(2) New techniques that must be either explored, or taught. These may be management techniques, mechanical techniques, operating procedures, or others;

(3) To inform the employees of competitive developments that everyone in the organization ought to know about.

Outside Meetings

Meetings outside the company also may be for many valid purposes. These might include:

(1) Civic meetings, at which appearances by supervisory personnel are imperative;

(2) Trade association meetings;

(3) Governmental or social meetings.

The higher a person goes up the supervisory tier, or the larger a company becomes, the more meetings he has to attend, or to lead.

Company Conferences

Company conferences are particularly important. Why?

(1) Because such conferences give each employee a feeling that he belongs, and that every program of the business is, in a real sense, his program, too. Each person who attends a meeting, and contributes to it in any way, is playing a part in whatever program is formulated and is more apt to develop the feeling that he is a member of the team.

Don't Let This Happen To Your Meeting:

" . . . and I think that just about covers that. Let's see, now; next we'll want to go over what little we know about . . . "

(2) Meetings give a supervisor a chance to assay the various qualities of the members of his team. Unrecognized talent for leadership is more apt to show up in such conferences than in the normal, day-by-day work in which this or that employee may be involved. The supervisor can determine, in a meeting, or in many meetings, the amount of interest each person has in projects of certain types; he can see, for himself, the grasp his employees have on various subjects; he can tell whether or not there are personality traits, or lack of such traits, that will make one employee a square peg in a round hole. Meetings help supervisory personnel to re-align the members of their staff to maximum effect.

(3) Incipient clashes or misunderstandings among individuals about specific programs can be found, and eliminated or assuaged, as a result of meetings. The clash of ideas, about specific projects, can be brought to the surface more quickly in meetings than in almost any other way.

A meeting may be a three-man discussion; it may include all the employees, depending upon the subject to be discussed.

Ground Rules

From the standpoint of top management, the most important points to bear in mind—or that will become obvious, after a time, are these:

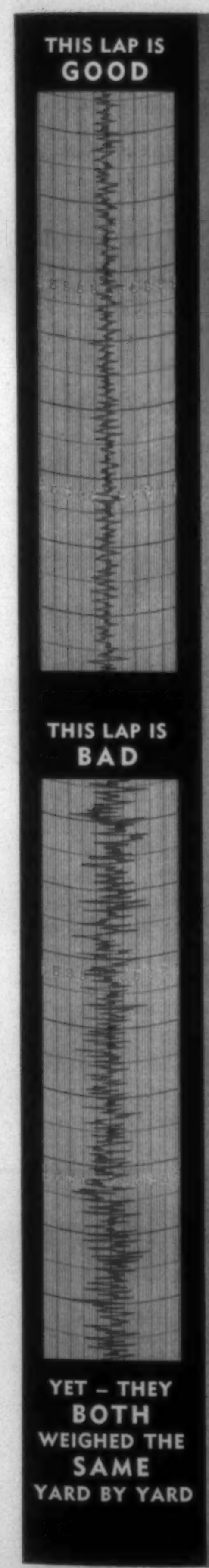
(1) Keep the number of meetings or conferences to a minimum, insofar as possible, without in any way discouraging essential meetings. Too many have a tendency to rob you of your hours, not to mention the hours that others in your organization spend at the meetings.

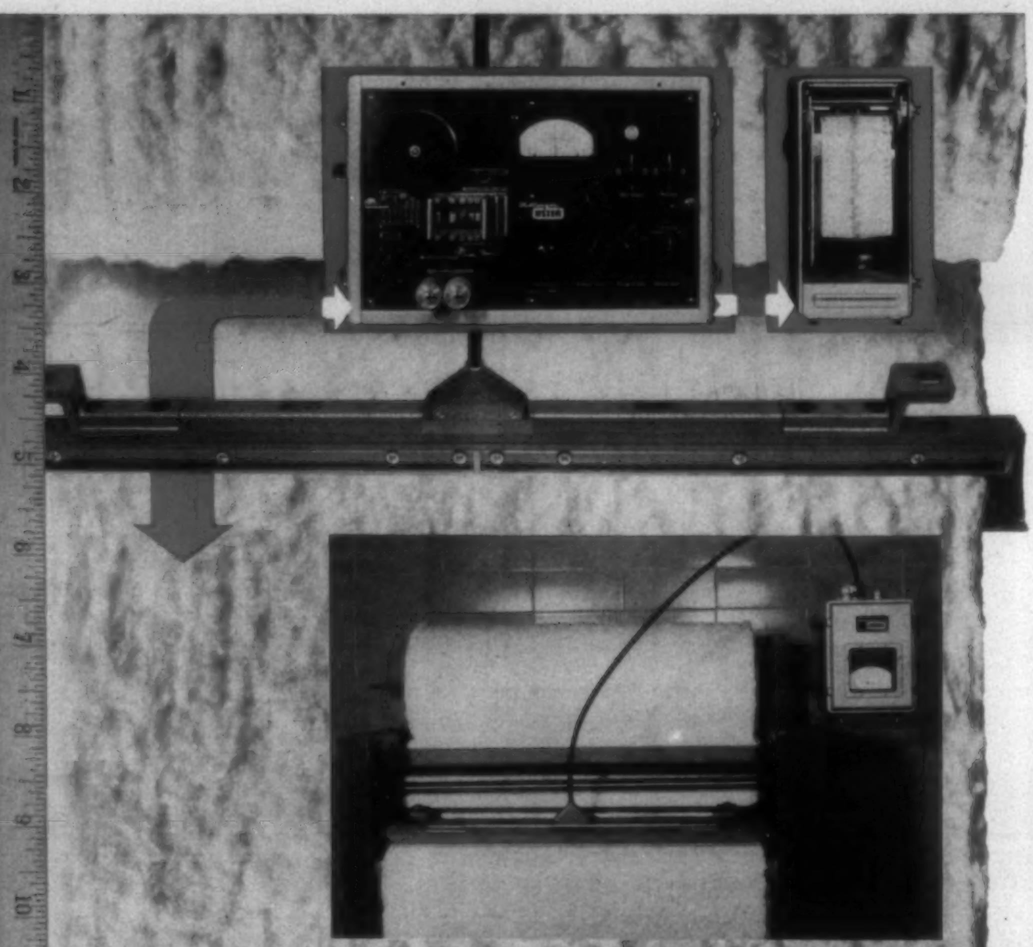
This is not to discourage supervisory attendance at essential meetings. If there is a good reason for a meeting, it ought to be worth attending, but unfortunately, many meetings are called by those who are not as careful about their planning as they ought to be. More than one supervisor, listing for a period the meetings he has attended, and rating each according to its importance or contribution to his overall management well-being, realizes that a third, and sometimes half, of the meetings could have been held without him, or had no useful purpose in being held at all.

(2) Keep meetings brief. A famous advertising executive always has boasted that all the conferences in his shop were held standing up in his office.

(3) Let the participants know well in advance the subject of the meeting, so that they can be giving some thought to the subject to be discussed, if they can contribute.

The most important part of any meeting you lead is the





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The Varimeter is versatile in that it can be mounted on the picker or on an unwinding device located in the picker room or in the laboratory. Irregularities are charted via the Uster Evenness Tester located either in the picker area or in the lab at the option of the mill.

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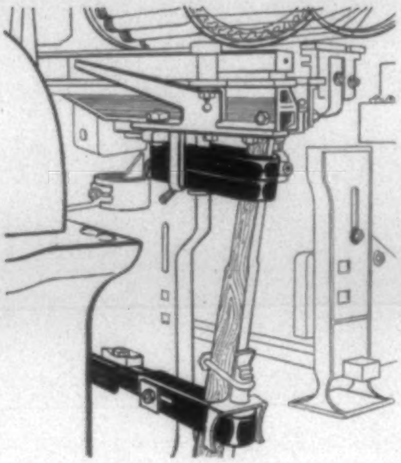

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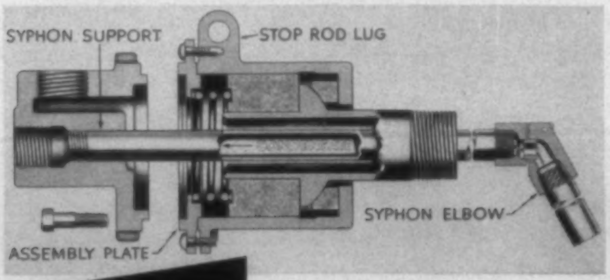

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advance thinking you give to it—the planning that goes into it. Delegate details such as where it is to be held (depending upon the size), adequacy of seating space or other physical arrangements, etc., but devote some time mentally to planning the principal points you want to develop. A meeting—any meeting—can be terribly time-consuming, and futile, without this adequate advanced planning.

Follow The Plan

First, you ought to have a good reason for the meeting, and those required or requested to be present should all have some stake in the meeting. Second, the meeting should stick (as a rule) to one subject. A meeting at which two, three or more subjects are discussed usually ends up with those attending wondering just what was decided, if anything, and some of the more aware will wonder what it was all about.

Third, a meeting ought to be restricted in time, in advance. The leader mentally should set a time-limit and observe it. There should be no time for long-drawn-out periods of extraneous discussions, pure gossip, theoretical talk to impress each other, or boring small talk. Fourth, when the central goal of the meeting has been achieved, it should be brought to a speedy conclusion so that all present may return to their work.

To Summarize

To sum up, supervisors constantly must make decisions about meetings. They have to decide (1) whether or not to go to certain meetings at all, or whether or not to send representatives; (2) whether or not to call meetings themselves to discuss a particular problem; (3) the best time for such meetings, from their own standpoint, and that of the others attending; (4) how to outline the topic of the meeting so it quickly can get down to the brass tracks; (5) how to speed up a meeting, once the decision is made to hold it, and yet not let it be so peremptory as to lose its impact, or to miss the target set for it.

A good booklet entitled, "Meetings Are What You Make Them!" has been published by Henry Strauss & Co. Inc., 668 Fifth Ave., New York 19, N. Y., relating to specific conference problems and how to make the most of each conference. It costs $1.

N. C. Vocational Textile School Will Accept New Students January 3

The North Carolina Vocational Textile School, Belmont, announces that new students will be accepted January 3, 1961. The school offers five courses: yarn manufacturing, weaving and designing, knitting, mill maintenance and tailoring. Classes are held 8:20 a.m. to 1 p.m. and from 2 p.m. to 6:30 p.m. Shorter hours may be arranged for students whose working hours conflict with this schedule. For students who work until 4 or 4:30 p.m., the school offers a class in yarn manufacturing from 5 to 7:30 p.m. and one in mill maintenance from 5 to 9:30 p.m.

The vocational school is constructing a new addition which will be completed the first of January. The installation of equipment in the addition is expected to be completed by the middle of January. Further information about classes may be obtained from Chris Folk, principal.

The Loomfixer And His Job Part 25

THE LOOMFIXER HAS AVAILABLE A NUMBER OF GAGES DESIGNED TO MAKE HIS SETTINGS MORE ACCURATE

By **WILMER WESTBROOK**

THE modern power loom is a precision-made machine with parts that should be set to close tolerances. A number of gages are available that can be used in the assembly, repair and maintenance of looms.

The use of these offers a number of advantages:

(1) The gage eliminates guess-work and each part is set with correct timing or clearance with other parts.

(2) With the use of gages all the loomfixers set parts alike and there is no changing and resetting each shift.

(3) It is easy to locate the cause of any malfunction of the mechanism by checking each setting with a gage.

(4) No time is lost by trial-and-error settings. A part once set by a gage does not have to be moved.

(5) Gage-set parts last longer.

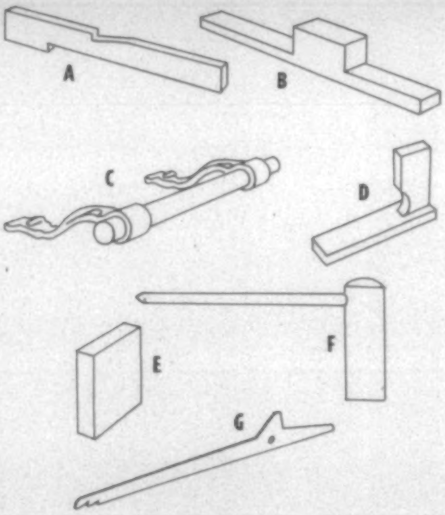
(6) It is easier to check the efficiency of a loomfixer and the condition of his looms when gages are used.

(7) Loomfixers can learn the job faster and are more adaptable to different models of looms, accessories and types of weaves when they are taught to use gages.

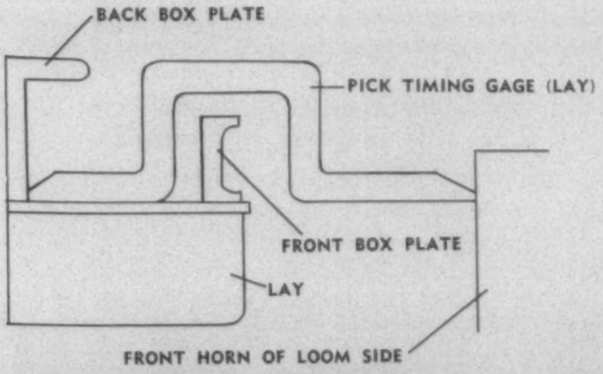
The loom manufacturers issue a number of gages, both for assembling the loom and for use in routine loomfixing and maintenance. When ordering these one should always specify not only the make, model and width of the loom but also the lot number and the number of any attachments or accessories that have been added since the loom was first installed.

Four different gages are used to align the battery and a number of other gages are used to set other parts of the filling changing mechanism. But the lay should be aligned before the battery is set.

Two gages are used to align the lay. The lay gage fits between the front horn of the loom side and the back box plate. The lay can be moved forward or backward by turning the crank arm eccentric pin—if used—or by adjusting the length of the crank arms. The lay centering gage is used to position the lay lengthwise by aligning the center marks in the lay and the breast beam.



Here are some of the gages available to the loomfixer to facilitate the accurate setting of his looms. They are: (a) center fork gage; (b) front box plate gage; (c) battery lining-up gage; (d) battery height gage (inside); (e) back box plate gage; (f) battery height gage (outside); and (g) battery end gage.



This illustration shows how the pick timing gage (lay) is used to time the pick cam.

The battery height gage (inside) fits between the top surface of the lay end and the milled bottom surface of the hopper stand. This gage has a "go" and a "no go" top surface and the low part should slide under the hopper stand for correct clearance.

The battery height gage (outside) fits over the end of the battery journal—with the thread guide removed—and the arm of the gage should contact the top surface of the lay end.

The shaft of the battery lining-up gage fits into the hole in the hopper stand normally occupied by the transferrer stud. Two arms pivoted to the shaft are fitted to the front surface of the back box plate and the reed to align the hopper stand to the lay. The back box plate and the reed should be correctly squared and aligned before the battery lining-up gage is used.

The battery end gage establishes the distance from the milled bottom surface of the hopper stand to the end of the lay end.

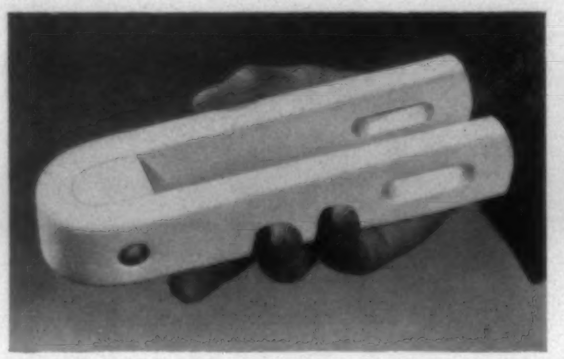
When these four gages have been used to position the battery correctly, other gages should be used to set some of its related parts.

The shuttle feeler gage is used to position the shuttle feeler in relation to the battery, and the shuttle feeler locating gage box positions the feeler in relation to the lay and the back box plate.

The shuttle positioning gage has two parts, one of which fits into the battery and the other in the shuttle. The purpose of this gage is to locate the shuttle in the right-hand box for the transfer of filling.

The front box plate serves a dual purpose. It determines

HARRIS HEAVY DUTY LUG STRAPS AND HOLD UPS



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the clearance between the shuttle and the inside end of the front box plate and also the clearance between the dagger and the frog steel. With the shuttle all the way in the box, the thick part of the gage should fit between the dagger and the frog steel with the dagger finger contacting the binder.

Another gage that is used for the protector motion is the dagger finger gauge. With the dagger resting on the frog steel, the shuttle out of the box, the gage should fit between the dagger finger adjusting screw and the binder.

The filling cam follower gage rests between the heel of the filling cam and the filling cam follower end with the lay in front center position.

The pick timing gage (lay) is placed between the front horn of the loom side and the back box plate. With both surfaces contacting the gage, the pick cam should be adjusted so that the pick ball rests in the hollow in front of the pick cam point or toe.

The pick timing gage (cam) locates the pick ball in relation to the cam.

The back box plate gage, or reed square, is used to square the back box plates and the reed. On older model looms it can also be used to square the sword to the lay.

The straight edge is used to align the back box plates, the reed and the lay ends. It is also used to true the shuttle race and check the lay for wind or warping. A straight edge that extends the full length of the shuttle race and one lay end is best to align high-speed looms. A 24-inch and a 12-inch straight edge used together will serve to align back box plates and lay ends on the older, slower looms.

A multi-purpose gage is used to set the center fork. It has a notch that is used to set the knock-off, and a notch to set the height of the fork prongs in raised position. The width of the gage is used to determine the clearance between the prongs and the shuttle and the length of the gage measures the distance from the fork holder to the end of the prongs.

There are a number of other gages that are used to set various parts of the loom. Regardless of the kind of gage you are using, make certain that it is designed for your looms. On high-speed looms a variation of a fraction of an inch in the setting of one part can mean the difference between efficient production of quality cloth and low-output, second-quality and high labor and supply costs.

November Textile Mill Failures Down

Some eight textile mill products manufacturers with liabilities of $1.3 million failed in November as compared with 12 manufacturers with liabilities of $782,000 in November of last year, according to a report published by the Credit Clearing House, New York City, a division of Dun & Bradstreet. In the first 11 months of the year 390 manufacturers with liabilities of $33 million failed.

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533 Accident Reports Received From N. C. Textile Industry In November

The North Carolina Industrial Commission reports that 533 accident reports were received in November from the cotton, woolen and silk industry as compared with 529 reports in October.

Some 41 reports were received from the bleaching and finishing industry as compared with 46 in October. For the fiscal year 1959-1960, the commission reports that there were 129,658 work injuries. It approved $13.9 million to be paid in medical and compensation claims.

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The Designing Of Pile Fabrics

By E. B. BERRY

TRUE CHENILLE REQUIRES A WOVEN FILLING YARN MAKING IT A RELATIVELY EXPENSIVE FABRIC

Chapter 14

Chenille

CALLAWAY Textile Dictionary defines chenille carpet as follows: "A luxury type of machine-made carpet that can be woven any desired shape and in widths up to 30 feet without a seam. It is expensive but there is no limit to the number of colors or the variety of designs that may be used and these factors, together with its ability to stand hard wear, account for its popularity. These carpets are made in two stages: first, making the chenille 'fur' (see chenille yarn), the process that controls the design and color of the carpet; and, second, weaving the carpet proper using the 'fur' as the face filling yarn. The catcher, chain, and stupper warps are usually of cotton, and the back filling yarn is of jute or coarse wool."

Chenille yarn is described by Callaway as: "A fancy yarn—made by weaving—with a fuzzy pile protruding from all sides. The usual method of production is to arrange leno ends in certain dents of the reed with a suitable number of dents left empty between them. A coarse soft filling thread is then interlaced with the warp and after weaving the fabric is cut lengthwise in the middle of the space between adjacent groups of leno threads. Each strip thus constitutes chenille thread and consists of tufts of filling yarn bound in by the leno threads."

Two Weaving Processes Necessary

Chenille rugs fall under the classification of filling pile. A true chenille rug is expensive because of the two weaving processes necessary to produce it. On the first loom, a warp (generally cotton) is prepared and is reeded uneven. Several ends are grouped together, with wide spaces between each group. The height of pile in the second weaving will be governed by the distance between these groups. A leno weave is used many times, as this will help bind the groups together.

Heavy wool filling is used with one color in a shuttle. As many shuttles are used as there are colors desired to make the pattern or design. Fig. 110A shows the cross-section of this fabric, after it comes from the loom, and before cutting. Fig. 110B shows what it looks like after it is cut. These strips are then passed through grooved rollers (Fig. 111) where under steam, it is heat set and appears as seen in Fig. 110C. The strip in this condition is called "fur" and resembles a caterpillar. This is where the name of the rug comes from, for chenille is the French word for caterpillar. This "fur" is then used as filling in the final weaving operation.

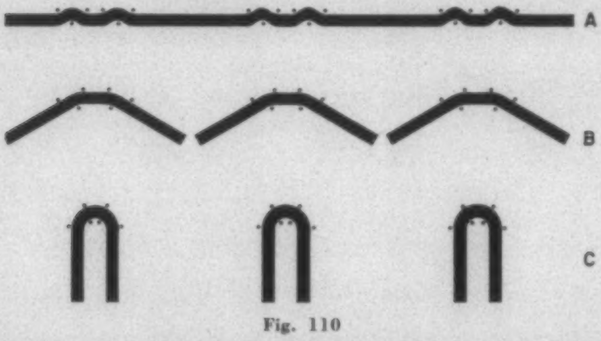


Fig. 110

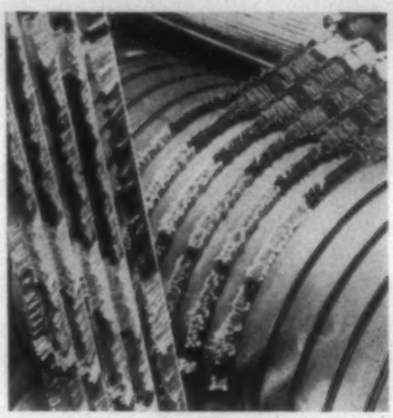


Fig. 111

The second weaving operation is expensive because it requires much hand labor, and is very slow. On looms five feet wide and over, there will be two or more weavers per loom. See Fig. 112. The ground filling will interlace with the ground warp to form the base fabric. The "fur" is then inserted as filling according to the pattern and is beaten up to the fell to form the pile.

Certain ends are called "catcher" threads and are used to

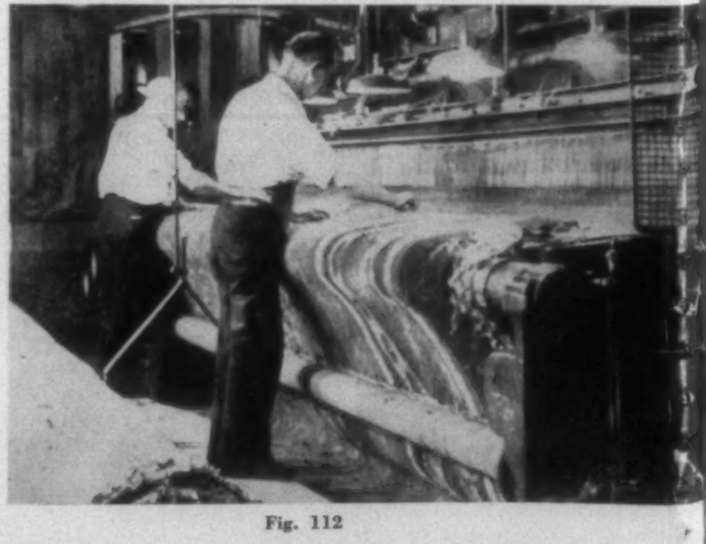


Fig. 112

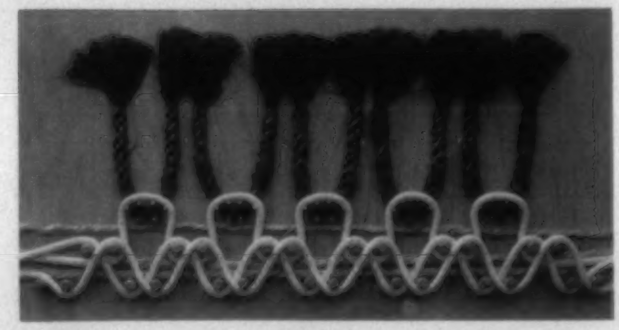


Fig. 113

bind the filling to the base fabric. These ends must be strong enough and close enough together to hold the fur filling or pile securely.

Fig. 113 shows the cross section of the weave for a typical chenille rug. Note the catcher threads which hold the pile pick in place. Here there are four ground picks to one pile pick.

One distinct advantage in this type of weaving is the fact that odd-shaped rugs may be woven. If an oval rug is desired, the background or foundation fabric is woven rectangular. The fur filling is inserted (by hand) to form the shape of the rug desired. Later, the ground fabric is cut to form the outline of the pile, then hemmed so it will not unravel.

Like the Axminster, this chenille makes very efficient use of the expensive wool pile. It is only on the surface, and is not imbedded in the body of the rug.

Variation

Chenille rugs may be made with the pile on both surfaces (face and back). After the first weaving, the "fur" is not put through the grooved rollers, but is allowed to remain as it is cut from the first loom. When this is used on the second loom, the pile will be exposed on both sides.

The author wishes to express his indebtedness to Bigelow-Sanford Carpet Co. for their kindness in allowing the use of Figs. 111 and 112.

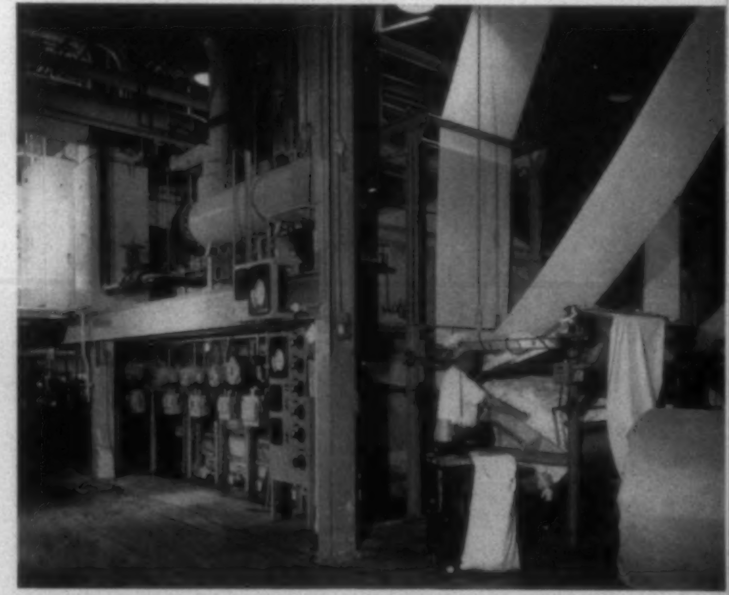
G. E. Inductrol D.C. Drives Find Application On Finishing Ranges At Springs Cotton Mills

GENERAL Electric Co. reports that its Inductrol d.c. drives are being used on four finishing ranges to process approximately 3 million yards of broadcloth a week at The Springs Cotton Mills, Grace Bleachery, Grace, S. C. Said to be the first such application in the textile industry, the Inductrol drives (induction voltage regulators; 3-phase, full-wave silicon rectifiers, and control equipment) provide controlled direct current at 32 to 250 volts from the plant's 550-volt, 3-phase, 60-cycle a.c. power system.

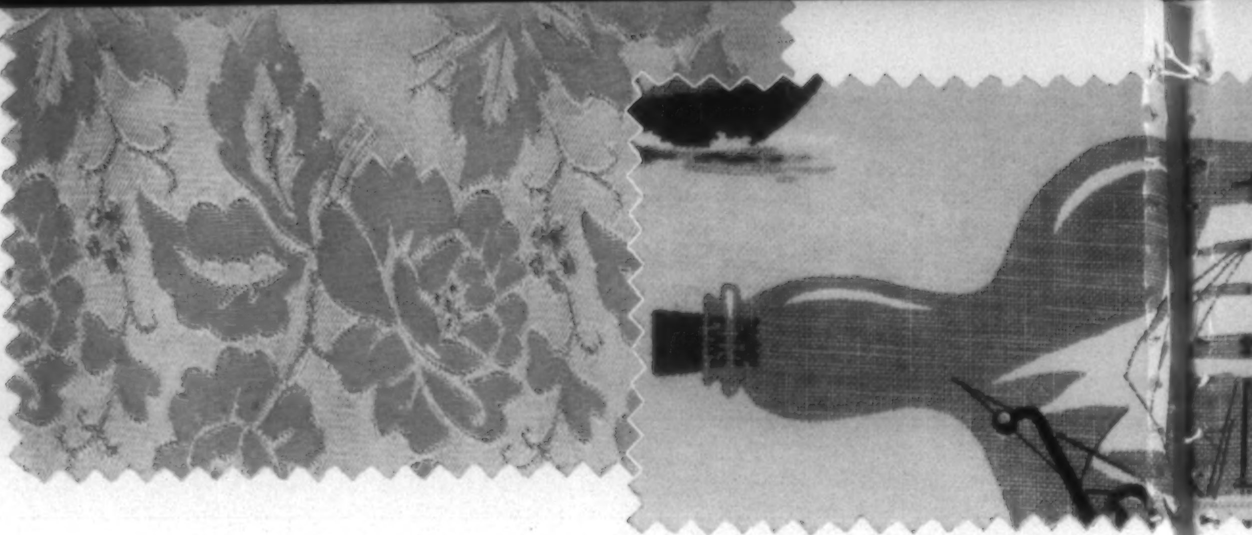
Each of the finishing ranges uses G.E.'s Kinamatic d.c. motors (in ratings from 3 to 40 h.p.) to drive individual machines at the co-ordinated speeds necessary to prevent cloth slacks and breaks. The Inductrol drives enable armature voltage control to adjust speeds of all motors over a scale of approximately 8 to 1.

The Inductrol power units were mounted overhead to save production space and reduce installation costs; and according to Springs, this was a primary factor in the selection of the static conversion equipment. Earlier ranges were powered by motor-generator sets housed in special, air-filtered rooms. Separate locations were necessary because large generators, if installed near the ranges, would accumulate lint and dust. Blowing out this lint and dust could easily spoil cloth passing through the range. With the separate rooms already filled, overhead mountings of the Inductrol units was of real benefit.

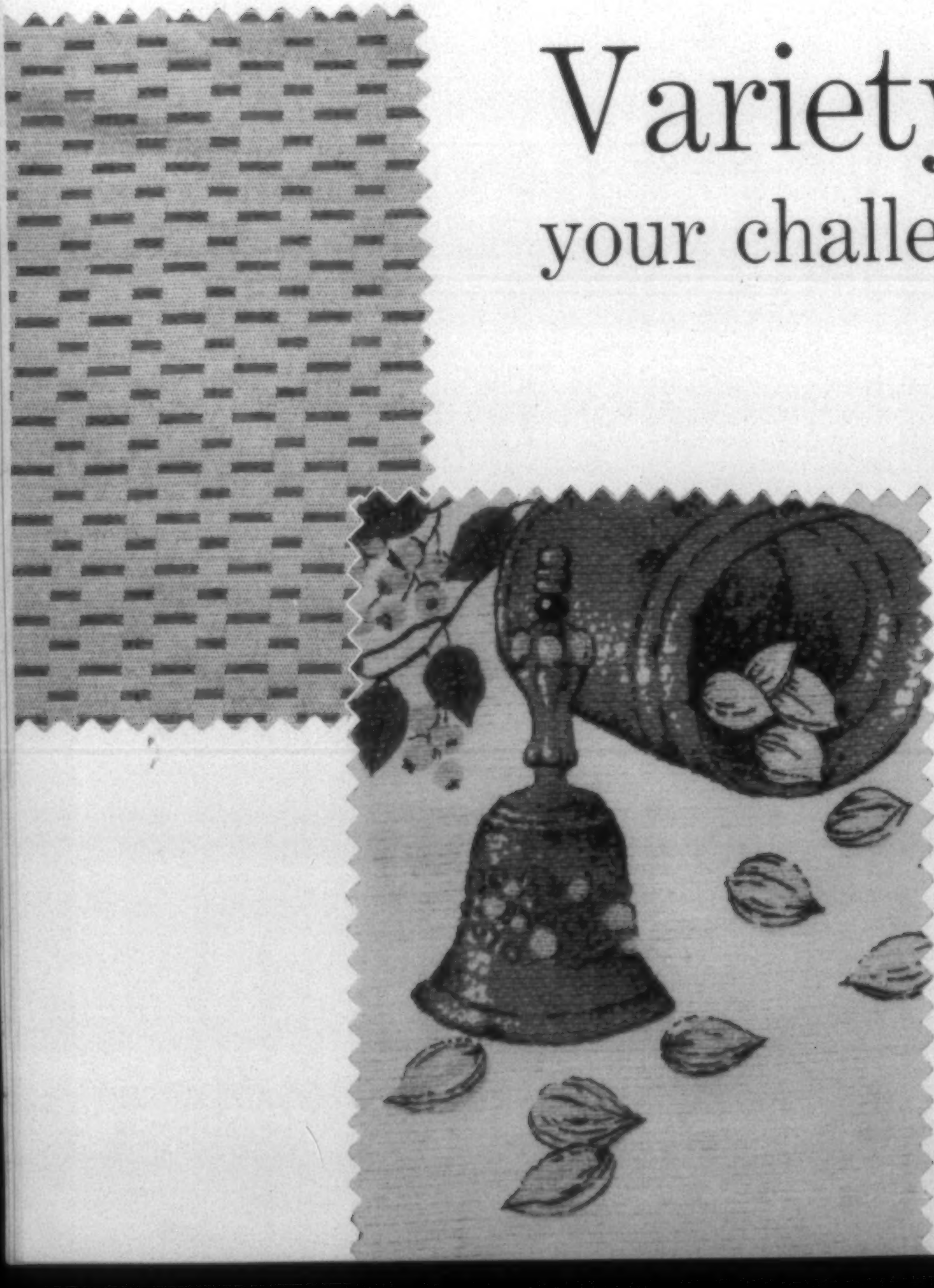
First installation of Inductrol d.c. units was on two of the finishing range drives. Later drives were obtained for two additional finishing ranges, a mercerizer and a dye range. According to General Electric, Springs encountered only minor problems in the initial start-up. Since the break-in period of the two initial finishing ranges in September 1958, no production time has been lost because of failure or maintenance of the voltage regulators, rectifier units or associated controls. The drives are now operating with once-a-month inspections.

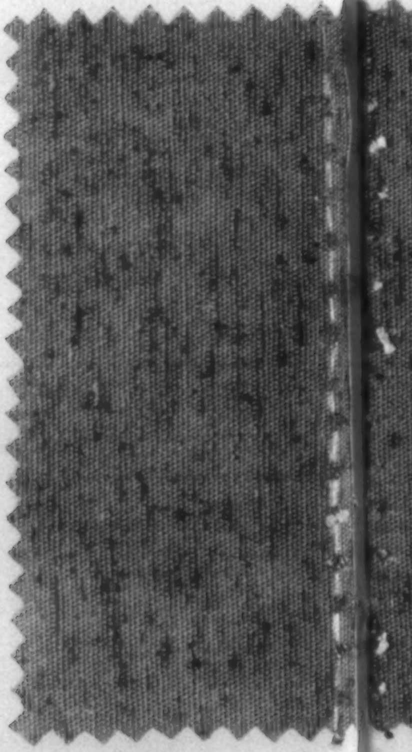


General Electric Inductrol d.c. drives, mounted overhead at extreme left, are comprised of induction voltage regulators, silicon rectifiers and associated controls. Their application at Springs Cotton Mills is said to be the first to be used for this purpose in the textile industry.



Variety's your challenge..........





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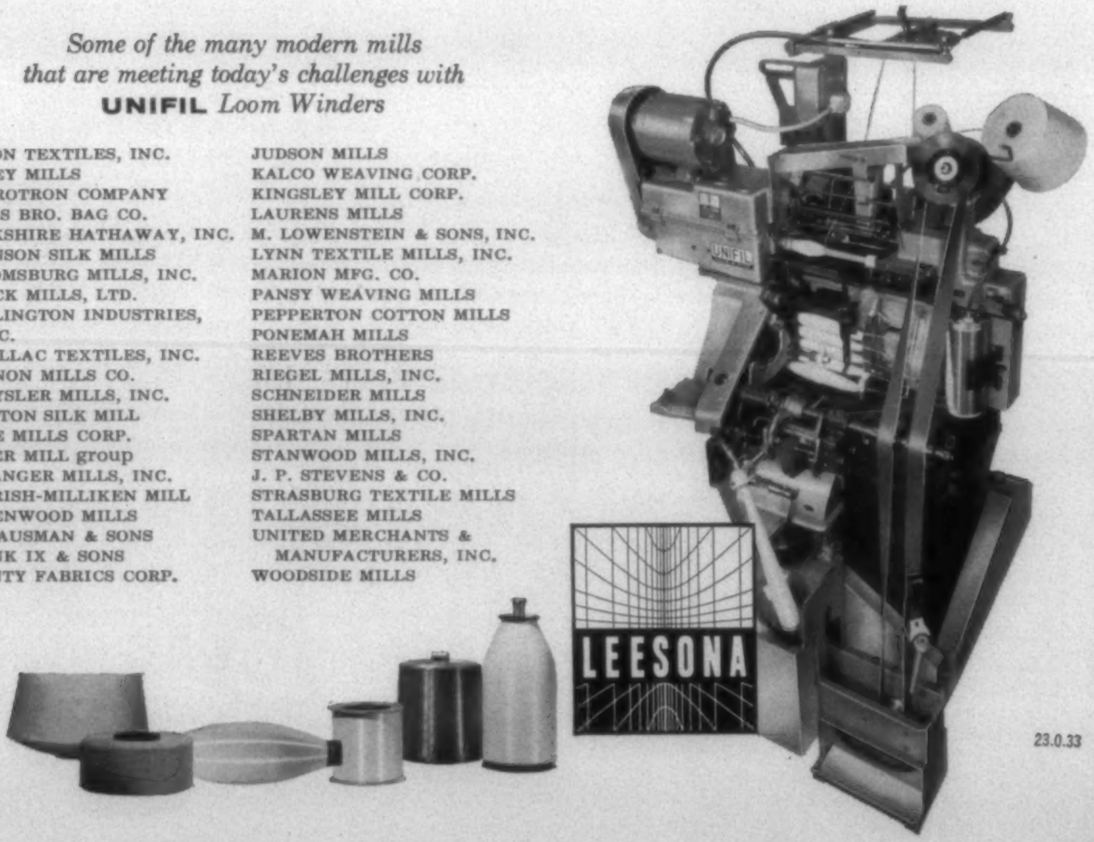

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Comparison Of Mill-To-Mill Quality Level Offered Under N. C. State College Program

QUALITY AUDIT PROGRAM ALLOWS SPINNERS TO COMPARE THEIR OVERALL QUALITY CONTROL LEVEL WITH OTHER PARTICIPATING MILLS; 500,000 SPINDLES UNDER CONTRACT

By **D. S. HAMBY**
School of Textiles
N. C. State College

THE Quality Audit Program was developed by the department of textile technology of the School of Textiles at North Carolina State College and is offered by the school as a service to the textile industry of North Carolina.

The program was designed to, first, determine the over-all quality level of the entire operation of a spinning mill; and secondly, to locate processes not functioning properly, in other words, trouble spots.

This is accomplished by sampling and testing each operation from picking through spinning. The sampling plan used is based on the number of spindles in the mill and is specifically designed to show the level of quality performance of each operation.

The tests performed at each operation are as follows:

(1) **Laps**—Picker laps are tested for per cent unevenness, total weight, ounces per yard and total yards.

(2) **Cards**—Cards are tested for sliver weight in grains per yard, per cent variation in weight within cards and between cards, and the per cent unevenness as measured by the Uster Evenness Tester, Integrator and Spectograph. Special arrangements can be made to conduct nep counts.

(3) **Combers** — Combed sliver is tested for grains per yard, per cent variation in weight within combers and between combers, and the per cent unevenness as measured by the Uster Evenness Tester, Integrator and Spectograph.

(4) **Breaker Drawing** — This process is tested only for carded yarn mills. The sliver is tested in the same manner as other slivers.

(5) **Finisher Drawing** — Finisher drawing sliver is tested for both combed and carded yarn mills in the same manner as other slivers.

(6) **Roving** — Bobbins, from both front and back lines of the roving frames, are tested for evenness, average weight and variation in weight. Spectrograms and %U measurements are made on all bobbins of roving.

(7) **Yarn** — The yarns which are tested are sub-grouped by counts and frames. Yarns are tested for count, strength, variation in count and strength for both within and between bobbins. Yarn grade and unevenness are determined and Spectrograph analyses are made for all yarns which are sampled.

Typical Summary

Table I shows a typical summary of results from a quality audit report. This shows not only the average performance of each process but also shows the variations of the process.

Table II lists the individual measurements for cards and combers; these results are summarized in Table I.

Any card or comber having an excessive deviation from the average performance can be located by examining Table II. One outstanding example of this is card No. 188 which had an extremely high range in weight. This range represents the difference between the highest and lowest numbers in the weight for five consecutive one-yard lengths of sliver. The per cent C.V.$_w$ indicates the coefficient of variation in weight within cards and the per cent C.V.$_o$ indicates the coefficient of variation for sliver weight as delivered from the carding

Table I—Summary Of Results From Typical Quality Audit Report

Material Tested	Standard	Average	Range	%CV$_w$	%CV$_o$	%U	Break Factor	Grade
Picker Lap	14.0 ounces	14.11		1.25				
Card Sliver	50.0 grains	50.87	3.9 grains	3.33	5.50	4.8		
Combed Sliver	58.0 grains	57.38	1.9 grains	1.42	4.70	5.15		
Finisher Drawing	60.0 grains	60.9	1.9 grains	1.34	1.90	3.84		
Roving	1.50 H. R.	1.52				5.02		
Yarn:								
Count	20/1 CP	19.60		1.45	2.89	11.88		
Skein Strength		159.44 lbs.		3.21	3.26		3125	B+
Count	38/1 CP	39.23		1.70	2.19	14.54	2856	
Skein Strength		72.80		3.48	4.49			B+

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Table II—Typical Data Sheet From Quality Audit

CARDS

Card No.	$\overline{X}_{n=5}$ (Grains)	R_w (Grains)	%U	Unevenness Patterns
171	52.4	2	5.79	
172	53.2	3	5.20	
173	50.2	2	5.20	10″, 14″
174	53.0	2	4.65	7″ 2½ yds.
175	56.0	5	5.11	7″
176	50.8	2	4.78	
177	49.4	2	4.29	
178	48.2	3	5.02	2½ yds.
179	52.2	5	5.18	2½ yds. 6 yds.
180	49.8	3	5.02	
181	50.8	3	4.49	6 yds.
182	52.8	4	4.62	
183	50.0	2	5.55	6 yds.
184	51.6	4	5.64	2½ yds.
185	51.2	3	4.69	
186	47.4	4	4.35	2½ yds.
187	52.0	7	4.44	6 yds.
188	48.2	17	4.23	
189	46.0	3	4.49	
190	52.2	2	4.02	2½ yds.
Avg.	50.87	3.9	4.838	
$\%CV_w$	3.33			
$\%CV_o$	5.50			

COMBERS

Card No.	$\overline{X}_{n=5}$ (Grains)	R_w (Grains)	%U	Unevenness Patterns
53	56.8	1	4.60	77″, 12″
54	57.4	2	4.82	3″, 8″, 12″
55	58.8	2	5.18	6″, 8″, 12″
56	59.4	2	5.50	3.5″, 6″, 8″, 12″
57	58.2	4	4.86	2″, 8″, 12-14″
58	56.8	2	4.90	8″, 12″
59	56.8	1	5.16	3.5″
60	58.4	2	5.68	10-12″
61	57.0	2	4.86	3.5″, 8″, 12″
62	54.2	1	5.96	3.5″, 7″, 13″
Avg.	57.38	1.9	5.152	
$\%CV_w$	1.42			
$\%CV_o$	3.15			

operation. The per cent U is unevenness as measured by the Uster Linear Integrator. The unevenness patterns are periodicities as measured by the Uster Spectrograph.

In Table III, the yarns are listed by frame and by count and the variation in both yarn number and skein strength are shown. The per cent C.V.$_w$ indicates the coefficient of variation within bobbins for count and strength and the C.V.$_o$ represents the over-all coefficient of variation for these two properties.

Frequency Distribution

Charts I through VI are typical accumulative frequency distribution for the properties shown. To analyze the exact performance of the mill whose data is summarized in Table I, it is necessary to compare these results with the charts. As shown in Table I, the coefficient of variation of picker lap weight is 1.25. This number is located in Chart I, and where this value intersects the curve, it is seen that only approximately 30% of the mills are better than this value. Approximately 70% are producing laps with a higher coefficient of variation. With an average for this property of 1.48, this mill is producing laps far better than average.

With the average range of 3.9 grains in card sliver, this mill is far worse than average with respect to this property. As shown in Chart II, approximately 89% of the mills sampled are producing sliver with less variation in weight and only slightly over 10% are higher than 3.9. This is also shown when examining the coefficient of variation within. The over-all coefficient of variation of 5.5, however, is below the average value. Actual-

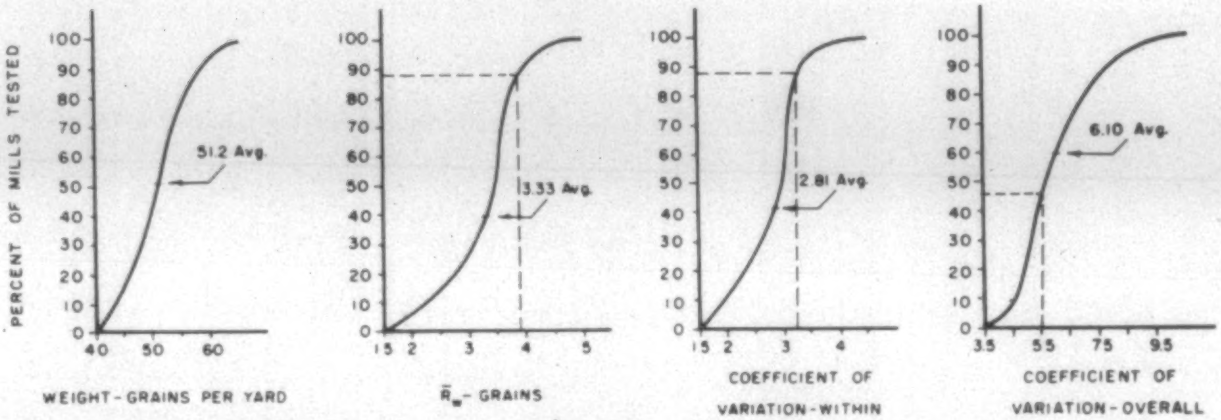
Table III—Typical Summary Of Yarn Tests As Reported From Quality Audit

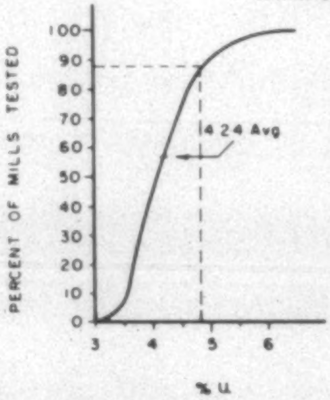
		COUNT			YARNS			STRENGTH			
Frame	**Std.**	**Count Actual**	**$\%CV_w$**	**$\%CV_o$**	**Skein Strength**	**$\%CV_w$**	**$\%CV_o$**	**Break Factor**	**%U**	**Grade**	**Evenness Patterns**
23	48/1 CP	48.91	2.17	1.96	56.29	3.02	4.47	2753	14.30	B+	3 yds.
48	20/1 CP	19.60	1.45	2.89	159.44	3.21	3.26	3125	11.88	B+	3″
40	38/1 CP	39.23	1.70	2.19	72.8	3.48	4.49	2856	14.54	B+	3 yds.
69	30/1 CP	30.01	1.40	3.04	94.03	2.93	6.27	2822	12.21	B	3″
46	30/1 CP	30.16	1.38	2.01	91.85	2.76	3.96	2770	13.06	B	4″
103	22/1 CP	22.26	1.37	2.59	128.5	3.08	6.06	2860	10.38	B to B+	10″
109	19/1 CP	18.56	1.39	1.76	170.68	2.29	3.40	2385	10.70	B to B+	3″ 13 yds.
102	16/1 CP	15.93	.89	3.16	203.3	1.99	4.00	3239	9.12	B	3″
70	20/1 CP	19.95	1.08	3.02	148	2.56	3.02	2953	9.37	B	
37	34/1 CP	34.77	1.36	1.94	80.6	2.91	5.31	2802	12.42	B+	3 yds.
35	28/1 CP	28.39	1.17	2.97	97.7	4.30	6.95	2774	11.28	B+	3″
87	22/1 CP	22.1	1.03	3.66	138.7	2.70	6.51	3065	10.88	B+	3″, 10″
62	18/1 CP	17.2	1.00	2.37	182.66	2.61	3.58	3142	8.58	B+	
118	12/1 CP	11.79	1.35	3.21	276.2	2.38	4.56	3256	8.06	B+	

CHART II

ACCUMULATIVE FREQUENCY DISTRIBUTIONS

CARD SLIVER WEIGHT AND UNEVENNESS





ly, only about 45% of the mills tested are producing sliver with an over-all variation of less than 5.5.

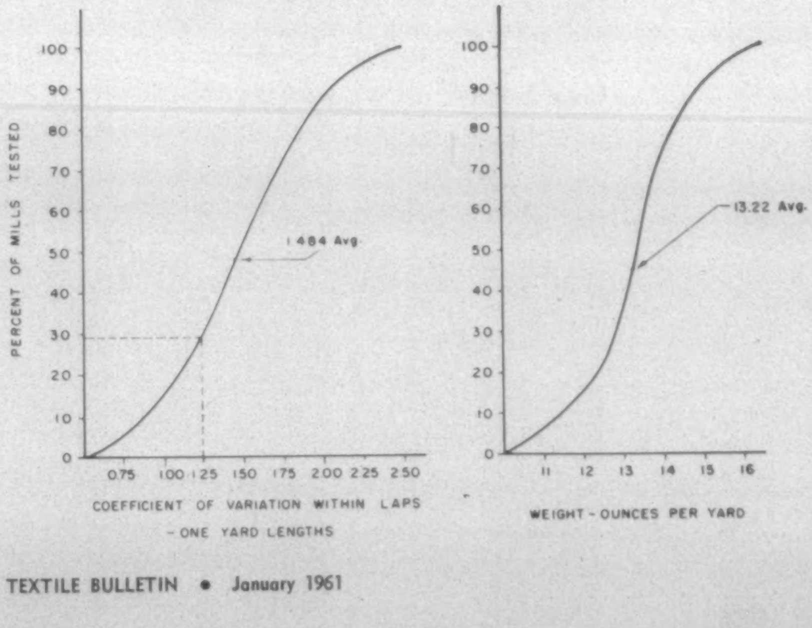
Since the coefficient of variation within cards is extremely high and the coefficient of variation over-all is relatively low, this means that all of the cards are set to perform at about the same level but that the performance within cards is very poor.

The %U or unevenness also shows that approximately 88% of the mills are producing a more uniform or even sliver.

CHART I

ACCUMULATIVE FREQUENCY DISTRIBUTIONS

PICKER LAP WEIGHT PER YARD



The 88% for coefficient of variation within card and the 88 or 89% for the per cent U are purely coincidental.

It is entirely possible for these numbers to be of different magnitude because two different properties are being measured. The per cent U represents the average variation in weight over relatively short lengths and the $C.V._w$ is measuring variation in weight from one yard to the next yard. By both of these measurements being high, it means that the cards are producing uneven material both on short lengths and long lengths. But when averaging the weights of cards, they compare quite well with each other, since the over-all coefficient of variation is on the low side of the average.

The combing operation of this mill would be considered average with respect to weight variation. The range and the coefficient of variation within, which actually are measuring the same property, show that approximately 50% of the mills are below this average and approximately the same number are above. For the over-all coefficient of variation, approximately 55% of the mills are producing sliver of more uniform weight than this particular mill. The per cent U or unevenness shows that approximately 40% of the mills are producing more uniform or even sliver.

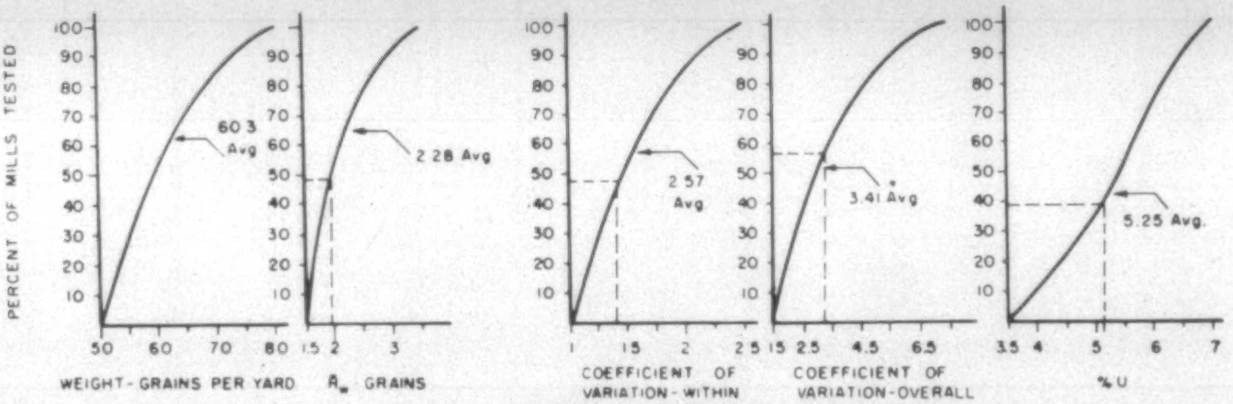
Chart IV shows the variation in weight for finisher drawing to be extremely low. Both the coefficients of variation within deliveries and the coefficient of variation over-all are well below the average values. The per cent U, however, indicates that the short term unevenness of the material is very high. Approximately 80% of the mills tested are producing more uniform sliver.

In studying these results, it is apparent that the yard weight variation is good; however, the short term variation as measured by the Uster Evenness Tester is much higher than average. This indicates that the drafting elements of this

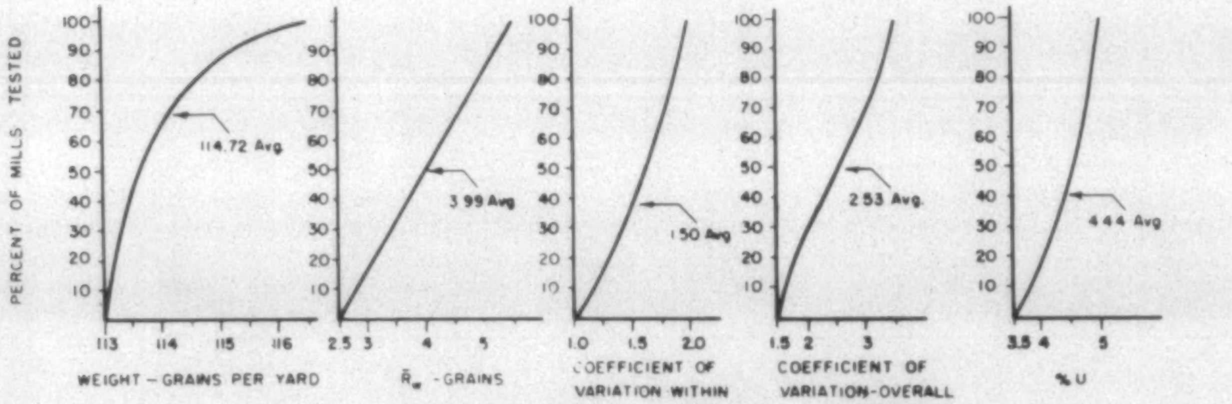
CHART III

ACCUMULATIVE FREQUENCY DISTRIBUTIONS

COMBER SLIVER WEIGHT AND EVENNESS



REGULAR WEIGHT SLIVER



DOUBLE WEIGHT SLIVER

CHART IV

ACCUMULATIVE FREQUENCY DISTRIBUTIONS

FINISHER DRAWING SLIVER WEIGHT AND EVENNESS

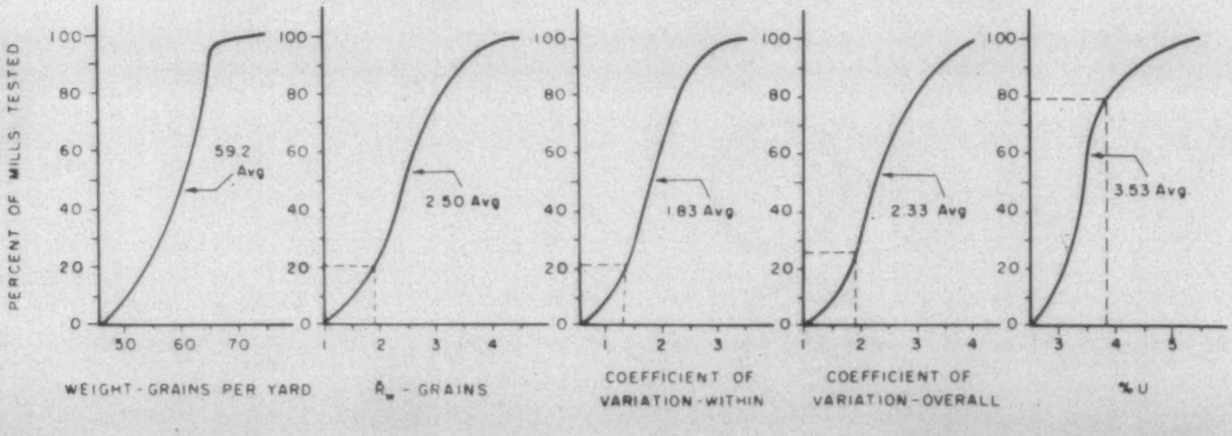
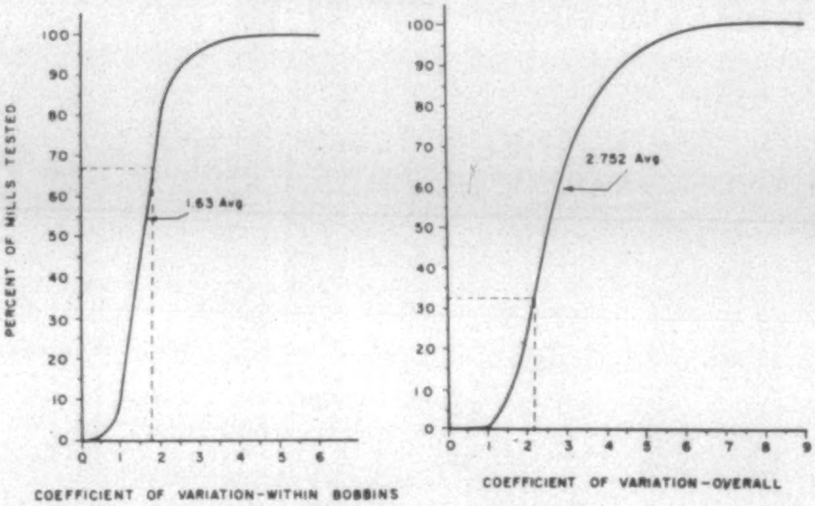


CHART V

ACCUMULATIVE FREQUENCY DISTRIBUTIONS

FOR YARN NUMBER



operation are not producing the level of quality which should be expected.

Chart V shows the variation for yarn number, and with a coefficient of variation within bobbins of 1.70, this mill is doing a fair to poor job of controlling within bobbin variation. As shown on the chart, this is above average and approximately 66% of the mills are producing yarns with less variation within bobbins. With single-process roving and single-creel spinning, this high within bobbin variation could be caused by the high per cent U found at the drawing operation. The over-all variation in yarn number is much less than average. Only 33% of the mills are producing yarn with less over-all variation in yarn number.

Chart VI shows the variation of skein strength within bobbin to be approximately average. This variation could possibly be reduced, however, by a reduction in the excessively high variation within bobbin for yarn number. This, in general, summarizes the type of analysis resulting from the audit program.

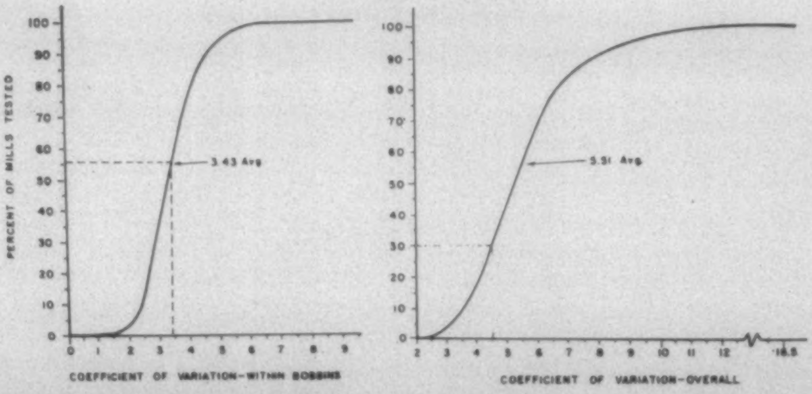
Participating mills have shown great interest in the program, and we've found that they are using the results in a number of different ways. Some are using the results as an audit of their own laboratory and of their manufacturing operations. Others are using the results as an unbiased measurement of performance and still others are using the results to isolate the areas in the plant which need direct attention.

To aid participating mills in the analysis and interpretation of these results, Ralph Barnard and Conley Robertson, members of the staff of the School of Textiles located permanently in Gastonia, have been assigned to this project. Their offices are in the Citizens National Bank at 427 West Franklin Avenue.

CHART VI

ACCUMULATIVE FREQUENCY DISTRIBUTIONS

FOR SKEIN STRENGTH



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Ten Years Of Cotton Textiles—1950 to 1960

THE PAST DECADE SHOWS A STEADY DECLINE IN SPINDLES, A DOWNWARD TREND IN PRODUCTION PER CAPITA AND A CONTINUATION OF HAND-TO-MOUTH BUYING PRACTICES

By W. RAY BELL, President
Association of Cotton Textile
Merchants of New York

THE twenty-ninth annual survey of The Association of Cotton Textile Merchants of New York includes all years in the fifties, beginning with the boom year of Korean War demand and ending with the relative satisfaction of 1959 performance. Our chart reveals that new all-time records were established last year in two directions. First, under 'Operation' there was an increase from 1958 of 9% in the number of hours per average active spindle, to a new annual figure of 6,360 hours. Second, imports of Countable Cotton Cloth zoomed more than 70% in yardage volume, in sharp contrast with an estimated 7% improvement in domestic output. Both records reflect the persistence of a strong demand situation throughout 1959 which was a true seller's year uninterrupted by uncertainties or lags in distribution. In respect to industry-wide earnings it counted as the best year since 1951.

Head Start In 1960

Under this momentum of recovery, the cotton textile industry entered 1960 in a happy spirit of confidence. Backlogs of orders against future production were at their peak for the decade. Surplus inventories were non-existent, except for working minimums at mill locations and in ordering channels of trade. Values had improved to a profitable basis, but without the excesses of former boom periods. In well maintained consumption at the retail level and rising activity among manufacturers of apparel and household products, the stage seemed set for an exceptional year of high activity and steady employment in the cotton mills of this country.

For the first six months of the current year, this proved to be the case. In this period cotton consumption rose by 3%, or 134,200 bales, over the 1959 experience to a total of 4.6 million bales. Spindle hour activity gained 4% over the first half of 1959 but, in the production of woven cotton cloth, Bureau of the Census estimates show a smaller improvement of less than 2½% or about 121 million linear yards in total.

Heavy Excess Of Imports

This is a record of modest gains in mill activity and cloth output in which nothing suggests the creation of topheavy supply to block the roadbed of recovery. From abroad, however, imports of Countable Cotton Cloth in the January-June 1960 period totalled 252 million square yards, or three times the previous record of 82 million square yards established for the corresponding period of 1959. In the month of June alone, imports of 51 million square yards exceeded the annual total of woven cotton cloth imports for any calendar year between 1947 and 1953. In addition to this stupendous volume of piece goods imports, now arriving at an annual rate of 486 million square yards, it is reckoned that another 400 million square yards of woven cotton cloth will enter our markets from overseas sources in the form of wearing apparel and made-up household goods. Coming mainly from Hong Kong and Japan, such imports represented a total of 319 million square yards in 1959. These countries are also large suppliers of piece goods, which now originate in more than 20 areas of the Far East, Europe and Egypt.

In earlier years of the decade, the most harmful effects of import competition were felt in separated areas of the market, like ginghams, velveteens or table damask, or other fields of special concentration. Overall, the volume was not of appreciable significance to influence basic supply and demand relationships. Now that the yardage involved in imported merchandise has climbed to more than 800 million square yards at annual rate, it represents a sizeable displacement of American industrial activity and employment. The threat of potential disaster can no longer be minimized, because it extends beyond the bounds of stability and growth of the American textile industry to its very existence as an asset to our national economy.

Each imported yard, whether in the form of cloth, made-up goods or apparel, supplants its equivalent in domestic production, and the huge additions to supply distort the market balance in relationship to current and prospective demand. This effect is especially pronounced in periods of digestion like the present, when the necessary adjustments to reduced market demand are saddled on the productive activity and employment of the domestic industry.

Hand-To-Mouth Buying Continues

Looking backward, it is apparent that the peak of market recovery was reached in the first quarter of the year. Except for a brief spurt of buying activity in April, primary markets have found little stimulation from new forward purchases. Throughout the channels of trade, at each stage of distribution, hand-to-mouth buying policies have long since been established and the accumulation of inventory which featured 1959 operations has been discarded in favor of its liquidation. In this traditional pattern of cyclical downswing, the distributing trades tend to live off their inventories and to adopt overcautious attitudes with respect to replacement purchases. Often in previous experience buyers could count on large accumulations

TEN YEARS OF COTTON TEXTILES

Data assembled by The Association of Cotton Textile Merchants of New York from Bureau of the Census reports and information obtained through the courtesy of machinery manufacturers.

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
EQUIPMENT											
COTTON SYSTEM SPINDLES											
Spindles in place at beginning of year	23,342,000	23,113,000	23,178,000	23,131,000	22,906,000	22,560,000	22,226,000	21,553,000	21,075,000	20,689,000	20,111,000
Increase or decrease from preceding year	409,000	229,000	65,000	47,000	225,000	346,000	334,000	673,000	478,000	386,000	578,000
New installation, additions and replacements	649,780	771,065	295,642	267,328	219,282	321,920	403,916	190,144	72,708	† 278,832	
OPERATION											
CONSUMING COTTON ONLY											
Average number of spindles active on last working day of month	20,456,000	20,662,000	19,944,000	20,051,000	19,383,000	19,137,000	19,064,000	18,278,000	17,671,000	17,638,000	
CONSUMING FIBERS OTHER THAN COTTON, OR BLENDS											
Average number of spindles active on last working day of month	1,295,000	1,261,000	1,337,000	1,323,000	1,327,000	1,541,000	1,534,000	1,582,000	1,647,000	1,636,000	
ALL COTTON-SYSTEM OPERATION											
Average number of spindles idle on last working day of month	1,372,000	1,264,000	1,887,000	1,572,000	2,015,000	1,628,000	1,234,000	1,443,000	1,539,000	1,036,000	
Spindle hours run:											
On 100% cotton	117,753,000,000	118,163,000,000	109,986,000,000	118,647,000,000	108,930,000,000	116,809,000,000	115,210,000,000	107,099,000,000	103,494,000,000	112,185,000,000	
On other fibers, blends	7,502,000,000	7,563,000,000	7,583,000,000	7,487,000,000	7,560,000,000	9,613,000,000	8,550,000,000	9,008,000,000	9,120,000,000	10,396,000,000	
Hours run per average active spindle	5,760	5,735	5,524	5,901	5,625	6,114	6,008	5,847	5,829	6,360	
MARKET											
COTTON TEXTILES											
Production in square yards	11,206,659,000	11,415,218,000	10,593,006,000	11,332,562,000	10,892,456,000	11,319,347,000	12,047,791,000	11,104,675,000	10,469,801,000	11,230,083,000	
Exports in square yards	558,678,000	802,427,000	761,595,000	621,005,000	605,047,000	537,493,000	506,570,000	547,889,000	500,932,000	472,285,000	
*Imports in square yards	47,799,000	45,779,000	36,337,000	64,300,000	73,484,000	133,252,000	188,248,000	122,447,000	140,996,000	240,372,000	
Available for domestic consumption	10,695,780,000	10,658,570,000	9,867,748,000	10,775,857,000	10,360,893,000	10,915,106,000	11,729,469,000	10,679,233,000	10,109,865,000	10,998,170,000	
Population at July 1st	151,683,000	154,360,000	157,028,000	159,636,000	162,417,000	165,270,000	168,176,000	171,198,000	174,054,000	177,103,000	
Available for per capita consumption in square yards	70.51	69.05	62.84	67.50	63.79	66.04	69.75	62.38	58.08	62.10	

*Countable Cloths only.
†Includes Estimate for Rebuilt Spindleage.

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of stock in mill warehouses being forced on the market at depressed prices.

Timely Adjustments Made

While market values have already sagged to low levels in reflecting competitive struggles for the available business, it seems unlikely that the cloth mills will soon again pursue the reckless practices of overproduction beyond the requirements of effective demand. Through hard experience they have learned that excessive mill stocks become a market liability which prolongs the period of adjustment and retards the eventual recovery. And for once in our history, substantial curtailment of mill operations has been announced well before exhaustion of the order backlogs. This realistic approach is bound to hasten a solution to the problem of market stability because of its current effect in limiting production pressures.

Third Quarter Production Declines

Preliminary estimates of the Census Bureau for the third quarter 1960 show a reduction in cotton consumption amounting to 178,000 bales, or 8% below last year's total for the corresponding period. Statistics on spindle hour activity for the three months likewise point to a decrease of over 6% from the 1959 performance. Embracing all divisions of the cotton textile industry, these figures furnish current evidence of mill foresight in coping with the reversed market conditions. With respect to broad woven cotton goods in general, they indicate a cut in supply of approximately 200 million square yards. In all probability, a like or greater amount of yardage will be deducted as a result of fourth quarter operations, under the choice of curtailment as opposed to the penalties of excessive warehouse inventory.

Solid Competition Prospects

On the demand side, excess inventory problems of dealers and distributors are gradually being solved through the steady consumption at retail of more than 181 million people of our domestic population. Their desires and replacement needs are the backbone of textile demand and, in time, must be serviced by new purchases and new pockets of inventory in the various channels of distribution. Should the industry successfully avoid the creation of burdensome stocks at the source of supply, it is reasonable to expect a shortened period of adjustment and early return of market confidence.

Morrill Named Head Of A.A.T.C.C.

Elliott Morrill, plant manager of the Indianapolis, Ind., plant of Corn Products Co., has been elected president of the American Association of Textile Chemists & Colorists for 1961. Morrill is chairman of the A.A.T.C.C. committee on conventions, a member of the executive committee on research and a member of the publications committee. He served as vice-president of the Western Region from 1957 to 1959. He has been a member of the association since 1925.

Elected as vice-president of the four regions were: New Engand, Dr. George Parks, professor of chemistry at the University of Rhode Island; Central Atlantic, William S. Sollenberger, assistant head of the dyeing and finishing division of the technical and textile service department of American Viscose Corp.; Southern, A. Henry Graede, Southern representative of the Laurel Soap Mfg. Co.; Western, Joseph H. Jones, general manager of Phoenix Dye Works.

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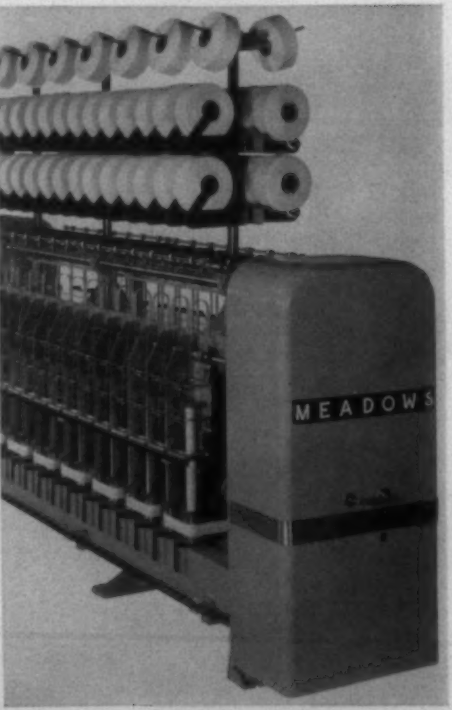

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How To Keep Caster-Equipped Units Rolling

CASTER-MOUNTED MATERIALS HANDLING UNITS STILL FIND AN IMPORTANT PLACE IN MOST TEXTILE MILLS

THE use of mechanized materials handling equipment in textile plants has greatly increased in recent years. More and more lift trucks, elevators, tramrail conveyors, vacuum systems, conveyor belts and special types of handling systems are being used to transfer material between the various processes in the mill.

But much of the material in textile plants is still hauled on hand trucks and in caster-mounted boxes. Due to the peculiar nature and requirements of many mill jobs, manual handling is still preferred.

Each application, of course, requires a special type, size and shape conveyor. You can't haul picker laps on a spinning doffer's truck and a warp beam truck is not suitable for hauling bobbins.

Many mill trucks and boxes are of standard dimensions and are factory-made. But for many individual requirements, a number of mills make their own trucks and boxes. A difference in the width of aisles and required capacities, for example, make standardization difficult.

Many Sizes Needed

Mill trucks will vary from small dollies used to move yarn to large trucks capable of hauling a ton or more of cloth. Caster-mounted boxes also differ widely. There is the doffer's box that holds about 300 bobbins, the filling box with a capacity of 2,000 bobbins, the card waste box that will hold a cubic yard of waste, and many others.

Mill-made trucks and boxes are usually mounted on standard wheels or casters. The casters can be obtained in different sizes and of various constructions. The plain steel caster has long been a favorite but is now being replaced in many installations by rubber or plastic casters with ball or roller bearings.

In some applications swivel casters are used and in others rigid and swivel casters are used in combination. When four casters are used swivels provide easy maneuverability but mounting two rigid casters on blocks in the center and one rigid caster at each end of the box is an arrangement that will permit the box to be turned in its own length.

Should Have String Guards

Strings often become wrapped around the casters and axles, especially in the spinning and weaving departments. If these strings are not removed periodically they will choke the casters and make it difficult to move the box or truck. Some casters are provided with guards that prevent much of the trouble caused by strings.

A caster that does not revolve easily makes the job harder and will also mark or scar the floor. Some of the rubber and plastic casters will leave a mark on a polished floor if they slide while making a turn.

Most casters will give many years of service if commonsense rules of maintenance are followed. A set of casters will outlast several trucks or boxes.

Most casters with anti-friction bearings have pressure grease fittings. These fittings permit lubrication through the axle or through the hub. Twice-a-year lubrication is usually sufficient for most mill casters with anti-friction bearings.

Plain Casters Can Be Oiled

Plain casters need more frequent lubrication. The easiest method to lubricate these casters is to turn the box or truck on its side and squirt some oil on the axle while revolving the caster to work the oil to all contacting surfaces. Plain casters should be lubricated about once a month. If the casters are easily removed a coating of grease on the axle will last several times as long as oil.

All casters should be inspected regularly for nicks, scars or imbedded material that will damage the floor. Sharp edges of metal casters should be ground and polished. Pieces of metal, glass and other foreign material should be removed from rubber or plastic caster treads.

But all the care given them will not compensate for casters that are poorly selected and installed. With all the standard casters that are available a little forethought should be given the size, type and composition that is most suitable.

Placement Important

Some engineering and experimenting may be necessary to place the casters on the vehicle to balance the load and for ease in handling. Placement of the casters is especially important on trucks with only two casters such as warp yarn beam trucks and general purpose platform trucks.

A truck or box that is poorly balanced on its casters not only makes the job harder but it is also a definite safety hazard. Unwieldly, cumbersome and easily overturned trucks and boxes are the cause of many serious mill accidents.

Since much of the material in a textile plant is moved on casters they should be given as much attention as other equipment. With proper selection, installation and care, they'll do a better job for you.

Progress In The Perfection Of Anti-Statics

PRESENT SCIENTIFIC WORK IS LAYING THE BASE FOR THE DEVELOPMENT OF BETTER ANTI-STATICS

By **PETER W. SHERWOOD**

WITH the widespread adoption of wholly synthetic fibers and the need for high-speed operations, static electricity has become a major problem in the textile industry. To combat it, mills have the choice of a wide array of chemical anti-static agents; research laboratories in both the textile and chemical industries are expending considerable effort toward solution of the problem; several governmental and association committees are charged with the task of setting standards by which effectiveness of anti-static treatment may be measured.

Yet, a truly satisfactory solution to the problem of static electricity is not at hand. Success in this area has been held back by insufficient knowledge of the problem's fundamentals, by the many different forms in which the problem occurs in the textile industry, and by unavailability of truly reproducible methods for measuring static electricity and, thus, for measuring the effectiveness of various anti-static agents. It is in these areas that considerable progress is now being made and a scientifically sound basis is thus being laid for developing fully satisfactory anti-static agents for various types of fabric.

What Is It?

Static electricity is a charge generated by friction between non-conducting surfaces. Its phenomena are generally recognized. Of most importance to the textile industry are the mutual attraction of oppositely charged particles (resulting in the pick-up of lint and dirt on the fabric), the mutual repulsion of bodies bearing a like charge (causing difficulty in aligning yarns), and the occurrence of sudden discharge (e.g., in the form of a spark) when contact is finally made with a conductor.

The significance of these phenomena is observed in customer dissatisfaction with textiles which acquire large static electric charges in use. At least as significant are the problems which are encountered in the textile manufacturing process due to static electricity, and which can lead to reduced plant output, lowered product quality, increased product waste, and hazard to both personnel and equipment.

A potential hazard of static electricity exists with nearly all fibers. However, cotton, rayon and wool, which are fairly hygroscopic, are capable of dissipating electric charges sufficiently that the potential problem only rarely becomes a real one.

It is the man-made fibers which exhibit the problem of static electricity to the danger point. These fibers are characterized by the twin properties of low surface conductivity, and low moisture absorption. Because of their very low conductivity, yarns and fabrics from these fibers are unable to dissipate imparted electric charges either to the ground or to the atmosphere at a sufficient rate to prevent build-up to the point of danger or at least to the point where plant performance suffers unless remedial action is taken.

Objectionable phenomena result from this throughout the textile manufacturing operation, all the way from blending and carding to inspection and packaging. For example, static charges in carding can cause fibers to load on the cylinders and may even prevent the fibers from forming a web. During weaving, a problem is caused by the attraction of dirt and lint to the fiber; in sizing, a beam with badly aligned yarns may be caused as the filaments repel each other. Similar, objectionable problems are encountered in almost every stage of the manufacturing process.

Varying Effect

Not all man-made fibers are subject to the problem in the same measure. Indeed, even different weaves of the same fiber will exhibit different tendency to the occurrence of static electricity. While absolute values for a fabric's proneness to accept static charges do not exist, relative tendencies can be measured by rubbing the fabric under standardized, reproducible conditions and measuring the resulting charge.

Illustrative are the values reported by Steiger[1] for various synthetic textiles which had been rubbed at standard conditions for one minute:

Nylon, Type 200, taffeta	5200 microcoulombs/sq. cm.
Orlon, Type 81, plain weave	1200
Acetate, Bright filament, taffeta	770
Arnel, Filament, taffeta	500
Dacron, Filament, ribbed shirting	360

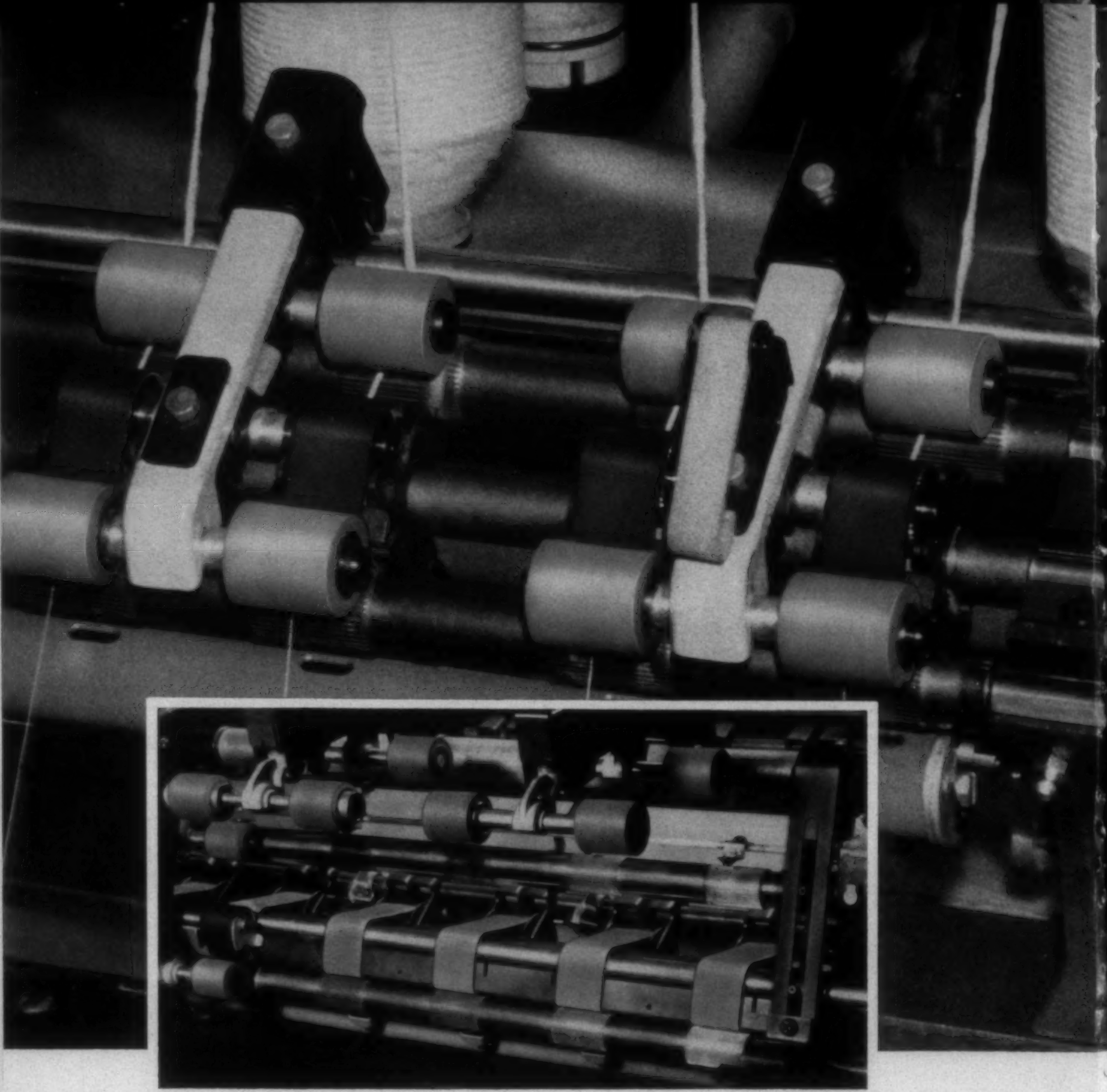
Methods designed to decrease the tendency of fabrics toward accepting charges of static electricity must achieve an increase in the conductivity of the material, in order that the charge may leak away as rapidly as it is formed. In many non-textile operations, the problem is coped with by grounding the material. In the textile industry, however, this solution is insufficient both in the manufacturing process and at the point of customer use.

The alternative is to bring about a situation of raising the surface conductivity of the material so that built-up static charges will leak away to the atmosphere. Here, the key is the amount of moisture which is retained by the fabric's surface since a clear correlation exists between moisture content and electrical conductivity.

Two approaches are possible: increase in the plant's relative humidity, and introduction of a strongly hygroscopic chemical into the fiber. As Valko[2] points out, all commercially successful anti-static agents are characterized by high hygroscopicity.

Both lines of approach are taken in practice. For many, however, only the use of chemical anti-static agents may be considered a feasible solution at all points where the problem of static electricity is encountered in textiles.

Simple as the principle sounds, the development and choice



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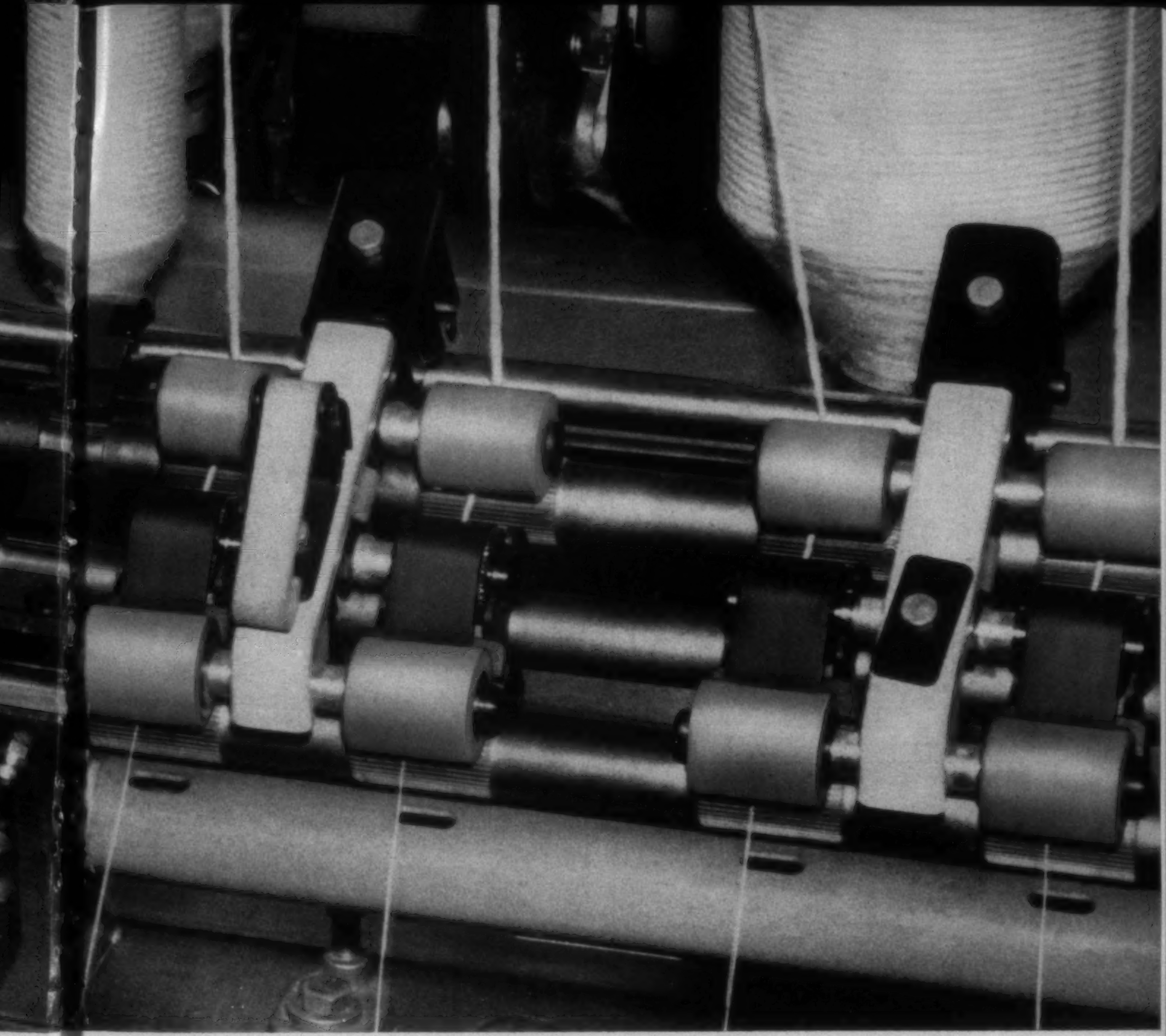

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of a satisfactory anti-static agent is accompanied by innumerable problems. The ideal anti-static agent would show high effectiveness per unit weight, it should be colorless, compatible with dyestuffs and finishing agents, and should offer no adverse effect on the fabric's principal properties, notably strength, hand and feel. Furthermore, the ideal additive should be wash and clean-fast; i.e., it must be insoluble in soap and detergent solutions as well as in the standard cleaning solvents.

No such ideal agent has been found, but progress is being made in this direction. The effectiveness of available anti-static agents depends largely on the extent to which they provide moisture regain, on the distribution of the hygroscopic body, and on the presence of ions and their mobility in the hygroscopic material.

Non-durable anti-statics, which serve principally as processing aids, will not remain in the fiber in the course of frequent washing. Successful materials in this group are almost entirely surface-active agents (mostly quaternary ammonium or polyoxyethylated compounds).

Durable anti-statics are cross-linked ion-exchange resins which are formed in the fiber. These resins generally contain polyoxyethyl chains as well as ionic groups. They are applied to the fiber from aqueous solutions by interaction with a cross-linking agent (e.g., an acidic or peroxide catalyst).

The Du Pont System

Illustrative of the components employed for fixing a wash-fast anti-static is the system recently patented by Du Pont (U. S. Pat. 2,820,724). This consists of three components:

(a) An aqueous dispersion of a cross-linkable, oxygen-containing polyamide.

(b) A cross-linking catalyst (e.g., p-toluene sulfonic acid).

(c) A water-dispersible polyether (e.g., a condensate of ethylene oxide with alkylphenols) which has no cross-linking properties and can be removed readily by scouring.

Among the more successful anti-static finishes which have been developed, mention may be made also of dialkyl dimethyl ammonium chloride, alkyphenoxy polyethoxy ethanol, and alkyl alkanolamine phosphate.

With the recent development of reproducible methods for measuring the static electricity built up in fabrics under standard conditions, it has become possible to correlate various functions bearing on this phenomenon. In an important study, Steiger[1] has found the following relationships:

(1) On a given fabric, the logarithm of the electric charge is proportional to the logarithm of surface resistivity, regardless of the finish which produces electrical conductivity.

(2) Logarithm of surface resistivity of a fabric is a linear function of the logarithm of the quantity of anti-static agent applied. On a log-log chart, curves describing the action of various anti-statics are nearly parallel over a wide range so that a single number can serve to characterize the effectiveness of a given additive.

(3) The action of anti-static agents appears to be chiefly dependent on the change which they produce in surface resistivity of the fiber.

(4) Static electricity ceases to be a serious problem under conditions where the logarithm of surface resistivity is less than 11.0 ohms per square.

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News Of The Trade

October Cotton Consumption Down

Some 666,819 running bales of cotton were consumed in the U. S. in October as compared with 801,445 bales in September and 732,245 bales in the previous October, according to the Bureau of the Census. Daily average consumption was 33,341 bales as compared with 32,058 in September and 36,612 in October 1959.

Foreign cotton consumption totalled 7,775 bales for October as compared with 8,524 bales in the previous month and 8,566 bales in the previous October.

Total consumption of man-made fiber in October was 36.9 million pounds as compared with 39.1 million pounds in September and 39.2 million pounds last October.

At 19.2 million, the number of active cotton-system spindles remained approximately the same as the previous month and October 1959. Spindle hours totalled 9.2 million in October as compared with 11.2 million in September and 9.9 million last October.

Table 1—Summary

ALL COTTON (Running bales) Total consumption	October 1960	September 1960	October 1959
United States	666,819	801,445	732,245
Cotton-Growing States	641,018	772,170	703,675
New England	23,063	25,820	25,358
Daily average consumption			
United States	33,341	32,058	36,612
Cotton-Growing States	32,051	30,887	35,184
New England	1,153	1,033	1,267
Index of cotton consumption adjusted for seasonal variations (1947-1949=100)	94	92	103
Stocks, Total	11,063,884	8,763,316	13,444,720
Consuming Establishments	1,053,326	1,017,365	976,310
Public Storage	10,010,558	7,745,951	12,468,410
Exports	(NA)	193,018	391,912
FOREIGN COTTON (Equivalent to 500 lb. gross weight bales)			
Total consumption	7,775	8,524	8,566
Stocks	88.733	96,237	86,407
Imports	(NA)	21,773	1,550
MAN-MADE FIBER STAPLE (Thousand pounds)			
Total consumption	36,899	39,081	39,197
Stocks	32,191	46,657	50,736
Imports	(NA)	3,539	7,374
COTTON-SYSTEM SPINDLES			
In place (thousands)	19,958	19,942	20,269
Active (thousands)	19,241	19,259	19,273
Hours operated (millions)	9,204	11,244	9,970

NA—Not Available

Table 2—Cotton System Spinning Spindles

	Consuming 100% Cotton		Consuming Other Than Cotton	
	Active Oct. 29, 1960 (thousands)	Spindle hours operated during period (millions)	Active Oct. 29, 1960 (thousands)	Spindle hours operated during period (millions)
U. S., Total	*17,618	*8,464	*1,623	*740
Cotton-Growing States	16,351	7,978	1,484	685
Alabama	1,474	668	24	9
Georgia	2,650	1,232	162	79
North Carolina	4,952	2,360	637	298
South Carolina	5,959	3,052	613	281
Tennessee	420	200	29	10
Texas	209	**	**	**
Virginia	543	**	**	**
Other states	144	56	8	2
New England States	1,195	471	120	49
Connecticut	75	**	**	**
Maine	353	114	8	2
Massachusetts	423	170	69	27
Rhode Island	248	108	1	——
Other States	96	**	**	**
Rest of U.S.	72	15	19	6
New York	18	2	——	——
Other States	54	13	19	6

Note: Detail may not add to totals because of independent rounding.
*Approximately 1% estimated for small firms reporting annually.
**Cannot be shown separately. Included in U.S. and area totals.

October Fabric Consumption Static On Woolen And Worsted Systems

The weekly average rate of fiber consumption on the woolen and worsted systems in October was approximately equal the September rate but 14% below the October 1959 level, according to the Bureau of the Census. Production of man-made fiber top from tow without combing is excluded from the tabulation.

The weekly average raw wool consumption during October was 7,431 thousand pounds (scoured basis) or 1% below the September level and 9% below the October 1959 rate. Consumption of apparel class wool was 1% below the September rate and 14% below the rate of October of last year.

The rate of consumption of carpet class wool was unchanged from the preceding month, and was 1% below the comparable period of last year.

Consumption of fibers other than raw wool averaged 4,619 thousand pounds per week. This was approximately equal to the rate of consumption during the preceding month and was 20% below the October 1959 rate.

Classification	Oct. 1960 (4 weeks) Weekly Average	Sept. 1959 (5 weeks) Weekly Average	Oct. 1959 (4 weeks) Weekly Average
All Fibers, Total	12,050	12,084	13,954
Raw wool	7,431	7,487	8,199
Apparel class	4,401	4,458	5,124
Woolen system	1,876	1,943	2,276
Worsted system	2,525	2,515	2,848
Carpet class	3,030	3,029	3,075
Noils, reprocessed and reused wool and other animal fibers	2,471	2,532	3,279
Man-made fibers	1,863	1,794	2,103
All other fibers	285	271	373

November Cellulosic Fiber Shipments Up

Shipments of acetate filament yarn in November amounted to 17 million pounds, a slight increase over the October level of 16.9 million pounds, according to the *Textile Organon*, official publication of Textile Economics Bureau Inc. Rayon yarn and staple deliveries in November were 62.8 million pounds, 6% higher than October. Of the combined November acetate yarn+rayon total, 78 million pounds were shipped to domestic consumers and 1.8 million pounds were exported.

November shipments of individual rayon products, along with the percentage change from October, were as follows: high tenacity rayon yarn 20.6 million pounds and +6%, regular+intermediate tenacity rayon yarn 12.4 million pounds and +9% and rayon staple+tow 29.8 million pounds and +5%.

The results of the *Organon's* annual survey of U. S. man-made fiber industry producing capacity reveals that the current total is 2,647 million pounds (annual basis of 51 weeks), consisting of 1,467 million pounds of the cellulosic fibers, 911 million pounds of the non-cellulosic fibers and 269 million pounds of textile glass fiber.

By next July, total capacity is expected to reach 2,745 million pounds, a gain of 4%. Projected capacity by March of 1962 is placed at 2,874 million pounds and a further increase to 2,999 million pounds is anticipated by November of 1962, an increase of 13% over the present.

The respective current and projected November 1962 capacities by principal products, together with the percent change, are given as follows (millions of pounds, annual basis): cellulosic fiber total 1,467—1,453—1% decrease; composed of acetate yarn 318—318—no change; acetate staple+tow 92—92—no change; high tenacity rayon yarn 343—341—1% decrease; regular+intermediate tenacity rayon yarn 186—174—6½% decrease; and rayon staple+tow 528—528—no change.

The respective non-cellulosic capacity totals are 911—1,183—30% increase; divided as nylon yarn+monofilament 456—629—38% increase; other yarn+monofilaments (acrylics, olefin, polyester, Saran, Spandex, TFE-fluorocarbon and vinyon) 69—119—72% increase; nylon staple+tow 41—33—19% decrease; acrylic+modacrylic staple+tow 206—10% increase; and other staple+tow (nytril, polyester and Vinyon) 139—176—27% increase. The textile glass fiber capacities are given as 269—363—35% increase.

English Textile Professor Develops New Method Of Filling Insertion

From England comes word of the development of a new shuttleless method of filling insertion. The new method, developed by Prof. J. J. Vincent, head of the textile department of Manchester College of Science & Technology, uses solid friction applied directly to the yarn. The yarn is inserted into the nip between two discs rotating with a high surface speed.

Professor Vincent recently demonstrated the method using 30s cotton. The yarn was projected with an initial speed of 210 feet per second and passed through a ring of 1¾-inch diameter at a distance of six feet from the point of projection. Vincent said that yarn as fine as 50s could be projected up to five feet. The technique is still in the experimental stage.

Woolens & Worsteds Of America Holds Second Annual Meeting

George A. Ott was elected president of Woolens & Worsteds of America Inc. at the group's second annual meeting recently at the Waldorf Astoria Hotel, New York City. Ott is a member of the board and former president of the Boston Wool Trade. He is treasurer of Richard Ott & Sons of Boston.

Fenwick Shepperd, presently membership director of Woolens & Worsteds of America, was elected executive vice-president. Three vice-presidents were elected by the group. They are G. Norman Winder, who for the past two years has been the association's president; William I. Kent, president of Kent Mfg. Co.; and Ronald A. Mitchell, treasurer of Cyril Johnson Woolen Co.

J. M. Jones, executive secretary of the American Sheep Producers Council was re-elected treasurer, and Ernest Meyers of the legal firm of Laporte & Meyers was elected secretary.

Speaking at the group's luncheon meeting, Stanley C. Hope, chairman of the board of the National Association of Manufacturers, offered a prescription to meet the problem of foreign competition. Elements in the prescription included income tax rate reform, resistance of inflationary wage agreements and settlements which prohibit management from taking steps to more efficient production, pressure on the Government to negotiate for relaxation of trade barriers of other nations, efforts to improve local business climate in the communities of America, and a raise in the general level of economic literacy of American workers.

O. V. Wells, administrator of the Agricultural Marketing Service of the U.S.D.A., told the group that the deductions of one cent a pound from grower payments under the Wool Act represent a substantial contribution on the part of sheep producers in the effort to help improve the market for wool. Wells also pointed out that several studies made during the last few years by the Marketing Service indicate that wool is the preferred fiber for many clothing uses.

S. C. Textile Manufacturers Association Picks Robertson To Succeed McClenaghan

Robertson

McClenaghan

William F. Robertson, vice-president of Riegel Textile Corp., has been named president of the South Carolina Textile Manufacturers Association succeeding George P. McClenaghan, vice-president of J. P. Stevens Co., who resigned for reasons of health. Robert S. Small, president of Woodside Mills, was named vice-president succeeding Robertson. John S. Abney, president of Abney Mills, fills the vacancy on the board created by Small's advancement.

A.A.T.T. Annual Meeting Set For Feb. 8 At The Hotel Commodore In New York City

The annual meeting of the American Association for Textile Technology will be held Wednesday, February 8, at the Hotel Commodore in New York City, with some 1,600 expected to be in attendance.

The conference program consists of morning and afternoon sessions, each offering two one-hour panel discussions with separate keynote speakers. Areas to be covered include: (1) mill operations; (2) converting; (3) end-product manufacturing; and (4) retailing and consumer related problems.

Serving as moderator for the mill operations panel will be Stanley Backer, assistant professor of mechanical engineering at the Massachusetts Institute of Technology. Panel members include George Asnip, Deering-Milliken; Max Thal, Alamac Knitting Mills; Michael Strub Jr., Duplan Co.; Joseph C.

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Arthur Spiro of Waumbec Mills Inc. will moderate the converter panel, with Abbott Copeland, United Merchants & Manufacturers, serving as keynote speaker. Panel members include Walter Ross, Rosewood Fabrics; Milton Stern, Titus, Blatter & Co.; David Travis, Travis Fabrics Inc.; Fred Fortress, Celanese Fibers Co.; and Stanley H. Rose, American Viscose Corp.

The banquet-luncheon speaker for the conference will be J. M. Cheatham of Dundee Mills, president of the American Cotton Manufacturers Institute, who will speak on "The Impact of World Events on Fiber Technology."

The meeting is open to all members of the textile industry and related fields. Advance registrations can be made through the chairman of the registration committee, C. J. Waitkus, E. F. Drew & Co., P. O. Box 158, Boonton, N. J. Registration cost, including the banquet-luncheon, is $15.

Third Quarter Textile Mill Profits Show Drop From The Second Quarter

The Securities & Exchange Commission reports that profits after taxes of textile mill products manufacturers dropped in the third quarter as compared with the preceding quarter in the 1959 period.

Profits after taxes for these manufacturers in the third quarter totalled $80 million as compared with $86 million in the second quarter and $105 million a year earlier. Profits after taxes of all manufacturers fell to $3.6 billion in the third quarter from $4.1 billion in the second quarter and $3.8 billion in the third quarter of 1959.

The commission reports that profit margins declined in the third quarter to the lowest levels in more than two years. Profits after taxes averaged 4.3 cents per dollar of sales as compared with 4.6 cents in both the preceding quarter and third quarter of last year.

A.C.M.I. Committee Chairmen Named

Chairmen of 17 standing and special committees of the American Cotton Manufacturers Institute have been announced by J. M. Cheatham, president of the institute. The new chairmen will hold office during the 1960-1961 business year of the institute, central trade association of the cotton, man-made fibers and silk segments of the American textile industry. Their terms correspond with that of the president. Cheatham is also president of Dundee Mills Inc. of Griffin, Ga.

The chairmen and their committees include: audit: George A. Fenton, The Duplan Corp., New York; budget, finance and policy: R. Dave Hall, Climax Spinning Co., Belmont, N. C.; cotton: L. G. Hardman Jr., Harmony Grove Mills, Commerce, Ga.; cotton policy: C. A. Cannon, Cannon Mills Co., Kannapolis, N. C.; long-staple cotton: Percy S. Howe Jr., The American Thread Co., New York; design protection: William G. Lord, Galey & Lord, New York; economic policy: J. L. Lanier, West Point (Ga.) Mfg. Co.; education: J. A. White, J. P. Stephens & Co., Greensboro, N. C.; foreign trade: Jackson E. Spears, Burlington Industries, New York.

Man-made fibers and silk: James P. Marion Jr., Bloomsburg Mills, New York; textile market: H. D. Ruhm Jr., Wellington Sears Co., New York; membership: William H. Ruffin, Erwin Mills, Durham, N. C.; national affairs: W. C. Daniel, Dan River Mills, Danville, Va.; public relations: R. Arthur Spaugh, Washington Mills Co., Winston-Salem, N. C.; re-

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search and technical service: W. W. McLeod, Coats & Clark, Newark, N. J.; tax: S. A. Hickox, Woodside Mills, Greenville, S. C.; and traffic: James C. Self, Greenwood Mills, Greenwood, S. C.

A. B. Emmert of Dan River Mills was named as the institute's representative on the board of appeals, an agency sponsored jointly by A.C.M.I. and the American Cotton Shippers Association. E. M. Fuller of Greenwood Mills, New York, was named as the representative on the General Arbitration Council of the Textile Industry.

E. B. Grover Heads A.S.M.E. Textile Division

Grover

Prof. E. B. Grover of the North Carolina State College School of Textiles has been elected chairman of the textile engineering division of the American Society of Mechanical Engineers. Other officers for 1961 include R. E. Parker, General Electric Co., Charlotte, vice-chairman; J. A. McPherson Jr., Lyle, Bissett, Carlisle & Wolff, Columbia, S. C., engineering consultant firm, secretary; and R. W. McCullough, Deering Milliken Research Corp., Spartanburg, S. C., treasurer.

The group will hold its Spring 1961 meeting at Clemson College March 16-17. Topics will include shuttleless looms and nonwoven fabrics. Arrangements are also underway for a Fall meeting to be co-sponsored by Lowell Tech and M.I.T. No indication has been given on time or place.

In a move toward broadening the scope of its meetings, the division plans to co-sponsor more of its future meetings with other technical groups. Consideration is being given to a proposed joint meeting with the Fiber Society in Raleigh, N. C., in the Spring of 1962. A possibility for the Fall of 1962 is a joint meeting with the textile division of the American Institute of Electrical Engineers.

Georgia Textile Group Announces Plans For '62 And '63 Meetings

Georgia Textile Manufacturers Association has announced convention dates and locations for 1962 and 1963. The 1962 meeting will be held in the Diplomat Hotel and Country Club at Hollywood Beach, Fla., May 17-19. The 1963 meeting will be held at the Boca Raton Hotel and Club, Boca Raton, Fla., April 17-20.

The association had previously announced that the 1961 convention will be held April 26-29 at the Hollywood Beach Hotel, Hollywood Beach, Fla. The board of directors of the association had requested that convention plans be determined three years in advance so that the best possible facilities could be obtained and to prevent conflicts or near conflicts with meetings of other textile associations.

North Carolina Textile Manufacturers Name Chairmen For 16 Committees

Chairmen have been appointed for the 16 standing committees of the North Carolina Textile Manufacturers Association. The committee chairmen will serve during the administration of President Donald R. Jonas, Johnston Mills Co., Charlotte.

The committees and the chairmen include: audit: Thomas W. Borland, Carlton Yarn Mills, Salisbury; cotton: C. A. Cannon, Cannon Mills Co., Kannapolis; cotton buyers and classers: Tom B. Crenshaw, Spindale (N. C.) Mills; employment security: C. A. Cannon; finance: D. R. LaFar Jr., LaFar Mills, Gastonia; legislative: Hal W. Little, Little Cotton Mfg. Co., Wadesboro; nominating: J. C. Cowan Jr., Burlington Industries, Greensboro.

Program: Donald R. Jonas; personnel: Elliott J. Neal, Rex Mills, Gastonia; public relations: W. L. Beerman Jr., Burlington Industries, Greensboro; research: Walser A. Blackwood, Washington Mills Co., Winston-Salem; resolutions: Charles H. Reynolds, Spindale Mills; safety: C. Marshall Davis, Golden Belt Mfg. Co., Durham; tax: T. R. Hosick, Threads Incorporated, Gastonia; textile school: Jesse A. White, J. P. Stephens & Co., Greensboro; and traffic committee: Julian Robertson, N. C. Finishing Co., Salisbury.

Synthetic Broadwoven Fabric Production In 1958 Shows 7% Increase Over 1954

During 1958, manufacturers in the synthetic broad woven fabrics industry shipped products valued at $1,231 million, an increase of 7% over 1954, according to preliminary results obtained from the 1958 Census of Manufacturers conducted by the Bureau of the Census. Average employment in this industry showed a decrease of 9% from 1954 to 1958 to a total of 82.3 thousand employees in 1958. Adjusted value added by manufacture in the industry amounted to $471 million in 1958, an increase of 15% when the previous census was taken.

General Statistics for the Synthetic Broad Woven Fabrics Industry

Item	Unit of Measure	1958	1954	% Change 1954 to 1958
All employees:				
Number	Thousands	82.3	90.0	— 9
Payroll	$ Million	278.5	272.9	+ 2
Production workers:				
Number	Thousands	75.0	83.1	—10
Man-hours	Millions	152.0	167.0	— 9
Wages	$ Million	235.1	234.5	——
Value added by manufacture	$ Million	471.4	408.6	+15
Cost of materials, fuel, electricity and contract work	$ Million	760.3	729.4	+ 4
Value of shipments	$ Million	1230.8	1159.3	+ 7
Capital expenditures, new	$ Million	15.0	13.0	+15
Number of establishments with 20 or more employees	Number	310	347	—11

Women Prefer Blends With New Fibers For Men's Suits, According To Study

A Du Pont study related to men's Summer suits is said to have shown what the average man knew all along—that women exert a strong influence on men in the purchase of their suits and even have definite ideas on such details as what fibers the fabric should contain.

It would also appear from the study that Du Pont's extensive advertising on behalf of its man-made fibers has achieved the desired result of making the ladies more conscious of the qualities of these fibers. When they think of modern fibers, according to the report, they consider such qualities as "performance," "stays neat," "comfortable," "easy care," and "fashionable." The results are said to have held true for three blends, Dacron and worsted wool, Dacron and cotton, and Dacron and rayon. Less favorable attitudes were reported for 100% wool and 100% cotton.

On an overall basis, 77% of the women were said to favor blends containing man-made fibers. When it came to natural fibers, 9% liked fabrics of all wool or cotton best. Thirteen percent either had no preference or "didn't know." In the South, women preferred blends of Dacron and cotton while in the north central and western regions the preference was for Dacron and wool.

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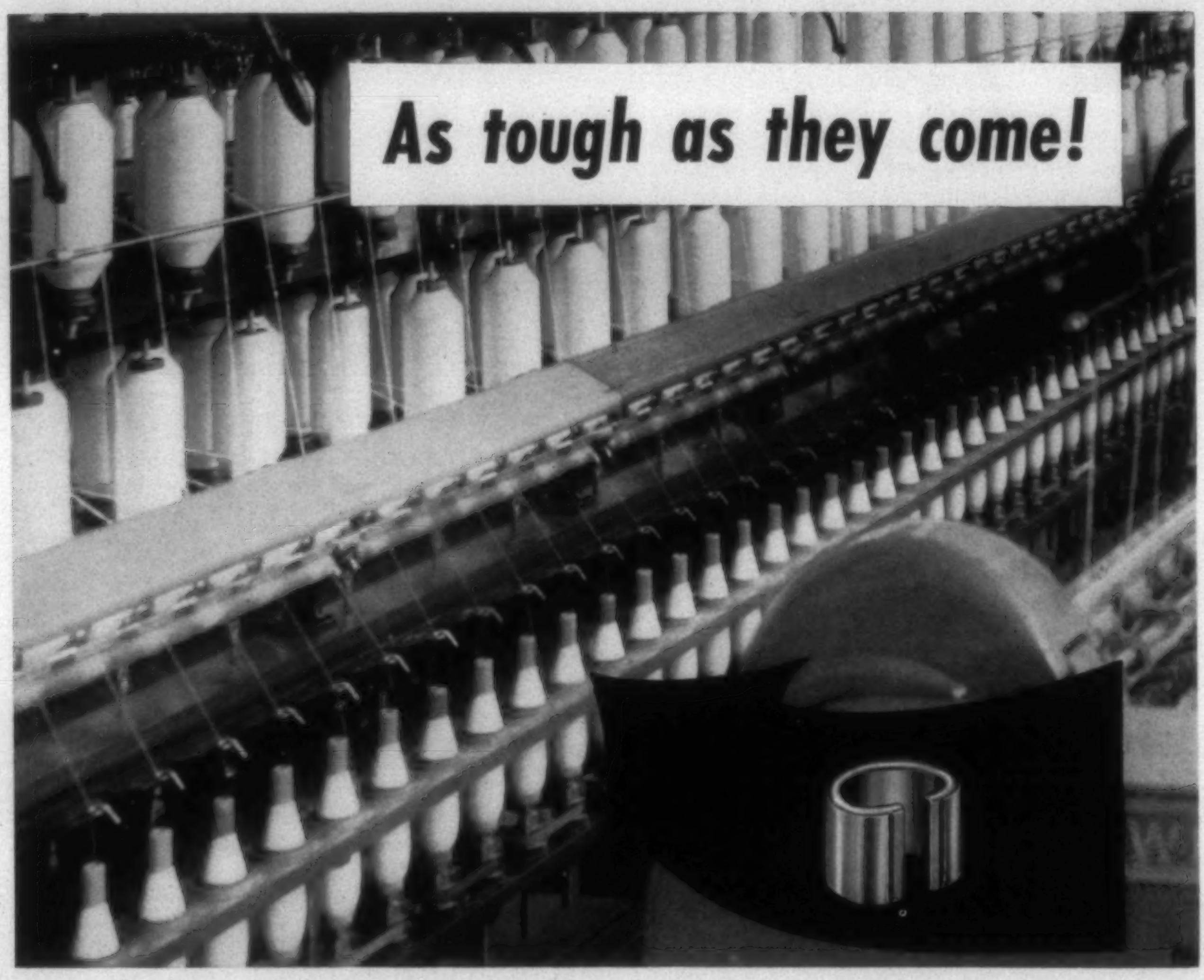

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P. L. Piercy	128 Hudson St., Spartanburg, S. C.
J. R. Richie	1037 Crabapple Lane, Raleigh, N. C.
J. K. Davis	P. O. Box 129, Auburn, Ala.
Larry Bellerose	North Grosvenordale, Conn.
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Transfers, Appointments, Elections,
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PERSONAL NEWS

Pittendreigh

William M. Pittendreigh has been named director of manufacturing development for Riegel Textile Corp. Since 1957 Pittendreigh has served as director of research and development for the firm. Prior to that he was superintendent of Riegel's greige mill at Ware Shoals, S. C. He will continue to make his headquarters in Ware Shoals. . . . In another appointment, Riegel has named T. J. Myers to the newly created post of director of production planning and inventory control for the firm's Johnston Division.

William B. Burke has been named superintendent of power for Cone Mills Corp., Greensboro, N. C. He replaces Charles E. Kerchner, who retired from this position recently. Burke was formerly with Nokomis Cotton Mills in Lexington, N. C. and joined Cone in 1925. He attended Brown University in Providence, R. I., and the Engineering Hays School of Combustion in Chicago.

Max W. Schrader has been named assistant manager of the Textile Shops Inc., Spartanburg, S. C. Schrader, a graduate of Clemson College, has been instrumental in the design and sales of wet and dry finishing equipment to the textile industry, as well as special processing equipment.

Albert S. Hartsell, general superintendent, Industrial Plant, J. P. Stephens & Co., Rock Hill, S. C., has been elected a member of the Rock Hill City Council.

H. Ralls Jennings has been appointed plant engineer for Fulton Cotton Mills, Atlanta, Ga. He will be responsible for the operation and maintenance of Fulton's 1.5 million square feet of manufacturing and office area in Atlanta. Jennings, who holds a mechanical engineering degree from the University of Alabama, previously held several important engineering posts with a Southeastern textile mill.

Cone Mills Corp., Greensboro, N. C., has announced several personnel changes including the retirement of three executives and the promotion of two others. . . . Earle R. Stall, vice-president and a director, has retired but will remain on the board and the committees on which he is now serving. Stall was formerly president of F. W. Poe Mfg. Co., Greenville, S. C., and of Florence Mills (now a division of Cone). . . . Arthur Makin is retiring as manager of the Tabardrey Plant. A native of Bolton, Lancashire, England, he joined the Tabardrey Plant 24 years ago. Prior to that he was associated with The Kendall Co. and Textile Development Co. of Massachusetts. . . . M. A. Bearden, retiring general manager of the Cliffside, N. C., division, became treasurer of the Cliffside Mills before it was a plant of Cone Mills Corp. He formerly served as an officer of the old Victory Mfg. Co. in Greenville, S. C., and of the old Pomona Mfg. Co. in Greensboro, N. C. . . . Lewis S. Morris, vice-president, will assume executive responsibilities for the Cliffside Plant. This will be in addition to his executive responsibility for the Revolution Plant. . . . Earle R. Stall Jr., assistant vice-president, will assume the executive responsibility for the operation of the American Spinning Plant, Greenville, S. C.; Florence Plant, Forest City, N. C., and Haynes Plant, Avondale, N. C.

Henry J. Dekker has been elected a vice-president of Deering Milliken & Co. Dekker has responsibility for development and sales in the greige to the converting trade of all fabrics containing man-made fibers. Formerly, he was plant manager of the Gerrish Milliken Mill, Pendleton, S. C., but joined Deering Milliken in 1957.

Several personnel changes have been announced by Winnsboro Mills, Winnsboro, S. C., a division of U. S. Rubber Co. . . . W. C. Hayes has been appointed industrial relations manager. Hayes joined U. S. Rubber in 1925 at Hogansville, Ga., and has served in various management positions. In 1940 he was transferred to Winnsboro and prior to his new assignment was superintendent of No. 2 mill at Winnsboro. . . . H. R. Jones has been named superintendent of No. 2 mill at Winnsboro. He is a graduate of Clemson College and joined the company in 1948. . . . R. C. Hunt has been appointed technical supervisor of No. 2 mill replacing Jones. Hunt joined U. S. Rubber after graduating from Clemson College in 1953.

Gray

Albert C. Gray, head of Coats & Clark's Southern spinning mills, is retiring from the company. He will be succeeded by P. E. Hilley, his present assistant. Gray began his career in the textile industry in 1910 when he took a job as card can doffer with a New Bedford, Mass., spinning firm. The same year he enrolled in the New Bedford Textile School, where he trained for seven years attending night classes. He joined Clark Thread Co., Newark, N. J., in 1932 as superintendent of carding and spinning. Gray was transferred to Georgia to direct operations of the firm's Southern spinning mills in 1954. He is a director of the Georgia Textile Manufacturers' Association.

Frank K. Greenwall has been re-elected president of the Corn Industries Research Foundation. Greenwall, who has headed the foundation during 1959, is chairman of the board of National Starch & Chemical Corp., New York City. William T. Brady and A. E. Staley Jr., were re-elected vice-presidents. Brady is chairman of Corn Products Co., New York. Staley is chairman of A. E. Staley Mfg. Co., Decatur, Ill. Floyd J. Hosking, executive vice-president and treasurer of the foundation for the past several years,

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was re-elected to these posts. Hosking is chief staff officer of the foundation at its Washington headquarters. Other staff officers to continue in their present positions are William J. Hoover, secretary and manager of technical services; Dr. John T. Goodwin Jr., technical director; Robert D. McMillen, public relations manager; and Michael F. Markel, counsel.

Halliday

Q. Stanley Halliday Jr. has joined the sales and service organization of Dixon Corp., Bristol, R. I. He will cover the South Carolina territory. Halliday graduated from Clemson College with a degree in textile manufacturing and then spent two years in Spartan Mills, Spartanburg, S. C. For the past ten years, he has been with the spinning division of Draper Corp. as a sales engineer.

Kenneth M. Lowry, director and general manager of Deering Milliken Service Corp., Spartanburg, S. C., has transferred to a permanent consulting position with the organization for health reasons. Lowry will be succeeded as general manager by L. K. Fitzgerald, who has also been elected a director. In his new capacity, Lowry will remain as a director of Deering Milliken Service Corp.

E. J. Heilman has assumed the new duties of carpet merchandising representative for The Chemstrand Corp. He will be located at Chemstrand's district sales office in Akron, Ohio, where he has served in sales capacities since 1957. Heilman is a graduate of North Carolina State College and a member of Phi Psi Textile Fraternity.

Dr. Gilman S. Hooper has resigned his position as vice-president in charge of research of Industrial Rayon Corp., Cleveland, Ohio, to become director of research and development of the fiber development department of Hercules Powder Co., Wilmington, Del. Dr. Hooper was in charge of the polypropylene fiber research program in which Industrial Rayon had been engaged. He joined Industrial Rayon's high polymer research division in 1949 and was elevated to vice-president in 1958. He is a member of Phi Beta Kappa, the American Chemical Society, the American Association of Textile Technologists and the American Association of Textile Chemists & Colorists.

Dr. Clide I. Carr has been appointed as department head in synthetic fiber research at U. S. Rubber Co.'s research center in Wayne, N. J. Dr. Carr holds a bachelor's degree in chemistry and mathematics at the University of Montana and a Ph. D. degree in physical chemistry from the University of California at Berkley. Since 1949 he has been with U. S. Rubber, doing research on Kralastic and Marvinol resins, high temperature resistant polymers and synthetic fibers.

Robert D. Sellers Jr., has been named a vice-president of Southern Bleachery & Print Works, Taylors, S. C., a division of Burlington Industries Inc. Sellers is a graduate of the Harvard University Graduate School of Business Administration. He joined Southern Bleachery & Print Works in June 1954.

Henry D. Ott Jr., chief industrial engineer of Excelsior Mills, Clemson plant, has been appointed chief industrial engineer of Gayley Mill Corp. at Marietta. Ott was graduated from Newberry College and joined Excelsior Mills in 1952.

John A. Reagan Jr. has been named public relations manager of Sonoco Products Co., Hartsville, S. C. Reagan will also continue his duties as advertising manager. He has been with Sonoco for 17 years. . . . Donald D. Dunham was named to the newly created position of assistant advertising and public relations manager. Before joining Sonoco, Dunham was employee communications editor for the Dayco Corp. in Dayton, Ohio.

Charles W. Carvin Jr. has been named vice-president for fiber marketing for Allied Chemical's National Aniline Division. Carvin will be responsible for the merchandising and sales of Allied's Caprolan nylon products. He was formerly director of merchandising of The Chemstrand Corp.

Peter M. Strang, research engineer for more than ten years at Whitin Machine Works, Whitinsville, Mass., recently retired from the company. Strang, a graduate of the Massachusetts Institute of Technology, was author of several textile books including one on the theory of carding. Prior to joining Whitin, he was associated with the Institute of Textile Technology in Charlottesville, Va., and at one time was senior cotton technologist for the U. S. Department of Agriculture. He has held memberships in the American Association of Textile Technologists, the Textile Institute and the Textile Research Institute.

Carman

Edward C. Carman has been appointed general manager of the Louis P. Batson Co., Greenville, S. C. For the past year Carman has been a sales engineer for the company in Greenville. Prior to joining Batson, he was in the sales departments of the Brush Electronics Corp. and Universal Winding Co. Carman was formerly associated with Union Bleachery in Greenville, Mayfair Mills in Arcadia, and Easley and Alice Mfg. Co. in Easley, S. C.

Neal M. Draper has been named vice-president of the National Aniline Division of Allied Chemical Corp., New York City, which will make him responsible for the sale of the division's organic chemicals, and dyestuffs and pigments. Draper joined Allied's Solvay Process Division in 1935 as a student salesman in the St. Louis, Mo., area. In 1957 Draper was named assistant to the president of National Aniline. A graduate of Washington University, he is a member of the promotion committee of the Vat Dye Institute.

Berard

W. Norbet Berard, research scientist at the U. S. Department of Agriculture's Southern Utilization Research & Development Division, New Orleans, La., has been appointed to represent the Southern Division at the U. S. Army Quartermaster Research & Development Command at Natick, Mass., where he will make his headquarters. Berard will conduct a program of cotton research, both chemical and mechanical, in co-operation with quartermaster scientists, on the application of U.S.D.A. textile research to military uses and will be responsible for translating military textile requirements into terms that will enable the Southern Division to include them in its research program. Berard studied chemistry and dyeing at the Bradford Durfee Textile School where he was graduated as a textile chemist in 1932. He joined the staff of the Southern Division in 1941 and at the time of his new appointment was directing research on the chemical finishing of cotton fabrics.

Two scientists who have been prominent in the American man-made fiber industry for more than 30 years have retired from American Enka Corp., Enka, N. C. They are John L. Bitter, marketing vice-president, and Dr. Martin Madewitz, technical vice-president. Both men are natives of Germany and attended the University of Leipzig. Dr. Wade-

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witz received his Ph.D. at the University of Leipzig and Dr. Bitter earned his doctorate at the Institute of Technology at Darmstadt. In 1928, VGF, a German rayon-producing firm, sent Dr. Bitter and Dr. Wadewitz to the U. S. to help establish rayon production at its newly created affiliate, the North American Rayon Corp. at Elizabethton, Tenn. Both left North American in 1949 to join American Enka. Dr. Bitter became research director and Dr. Wadewitz technical director. Dr. Wadewitz was elected technical vice-president in 1959 with responsibility for manufacturing, research and engineering. They were named to their present posts in 1957.

D. D. Quillan has been named vice-president of Chicopee Mfg. Co., Athens, Ga. Quillan continues as general manager of manufacturing for the Lumite Division which operates mills at Cornelia and Buford, Ga., in the weaving of filament plastic yarns. Quillan joined Chicopee in 1950 as plant manager of the cotton greige mill at Athens. He was named to his post with the Lumite Division in 1958.

Duncan G. Steck has joined The Chemstrand Corp. as a product information specialist. Before joining Chemstrand, Steck served for a year with J. Walter Thompson Co., New York advertising agency, as a television publicity writer. Earlier, he served in editorial capacities on *Women's Wear Daily, The Camden* (N. J.) *Courier Post* and *Film Bulletin*, Philadelphia. Pa.

Marshall Chapman, vice-president and assistant secretary of Inman (S. C.) Mills, has been named president of the Palmetto Area Council of the Boy Scouts of America.

Mrs. Landis

Mrs. Oliver D. Landis, vice-president and secretary of Oliver D. Landis Inc., Gastonia, N. C., recently returned from a three-week business tour of Europe. The Landis firm is sales agent in this country for several European manufacturers of textile supplies and accessory items.

OBITUARIES

Roger Gant, 73, chairman of the board and treasurer of Glen Raven (N. C.) Cotton Mills, died recently in a Burlington, N. C., hospital. Mr. Gant served for a number of years as president of the firm. He was also president and treasurer of Glen Raven Silk Mills and treasurer of Glen Raven Knitting Mills. Survivors include his widow, three daughters and two sons.

William Harden, 65, secretary and assistant treasurer of the Carlton Yarn Mills, Cherryville, N. C., died December 6. Mr. Harden had been connected with the textile industry for 41 years. Surviving are a son and a daughter.

J. H. Hayes, 80, former general manager of Fitzgerald (Ga.) Mills Corp., died December 1 after a short illness. Mr. Hayes retired from the mill a few years ago and since that time had served as chairman of the board of directors. He joined Fitzgerald in 1902 as superintendent.

James E. Sumpter, 52, with Cannon Mills Co. since 1939 as a salesman of industrial greige goods and merchandized sportswear fabrics and canton flannels, died November 27 in Chicago. Mr. Sumpter was at one time manager of Branch Spinning Mills, Hopedale, N. C. Survivors include his widow and a son.

Charles D. Whitney, 78, former official and operator of worsted mills in New England and the South, died December 7 in Franklin, Mass. Mr. Whitney operated Whitney Worsted Mills and the Clover Worsted Mills in Franklin and Premier Worsted Mills with plants located in Woonsocket and Pascoag, R. I., and Raleigh, N. C. He was general manager and vice-president of Southern Worsted Mills, Greenville, S. C. He leaves his widow and a daughter.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

WEST POINT, GA.—West Point Mfg. Co. reports decreases in sales and profits in the first three months of the current fiscal year as compared with last year. Net sales for the period were $35.5 million as compared with $37.7 million in the first three months of 1959. Income after taxes totalled $1.7 million as compared with $1.9 million previously. Unfilled orders have declined 6% since the beginning of this fiscal year, the company reports, and are 28% less than this time last year. Joseph L. Lanier, president, said that the company anticipates that its shipments for the first half of this year will be down about 10% from a year ago. This was the first quarterly report issued by West Point. The company previously reported on a semi-annual basis but will report quarterly hereafter.

CHATTANOOGA, TENN.—Standard-Coosa-Thatcher Co. reports a 47% increase in profits and a 3% increase in sales in the fiscal year ended October 1. Profit for the year was $1.4 million on sales of $25.5 million. This compares with earnings of $931,000 on sales of $24.7 million in the previous fiscal year. Current assets declined to $9.8 million from $10.5 million. Total current liabilities totalled $2.2 million as compared with $2.8 million in 1959.

NEW YORK, N. Y.—J. P. Stevens & Co. reports that consolidated net sales for its fiscal year ended October 29 were $512.7 million against $459.4 million for fiscal 1959. Consolidated net earnings for the year, after provision of $17.8 million for federal and state income taxes, were $15.3 million. In spite of record sales for the year, lower profit margins resulted in a drop in earnings from $4.51 a share in 1959 to $3.65 for fiscal 1960.

HARTSVILLE, S. C. — USF-Arnold Finishing Co. here has given notice to employees that it will not renew a union contract under its present terms and that the plant may be forced to close if it continues to lose money. Letters outlining the company's position have been mailed to some 400 employees. The letter said that the contract with the United Mine Workers of America has proven to be unworkable. Employees endorsed the United Mine Workers union two years ago after being represented by the United Textile Workers of America for 15 years. USF-Arnold Finishing Co. is owned by Indian Head Mills of New York City. Annual payroll of the Hartsville plant is $1.7 million.

SAYLESVILLE, R. I. — Sayles Finishing Plants Inc. has given notice that it will discontinue operation of its Sayles Bleacheries Division by January 27. The company said that December 23 had been set as the deadline for accepting any finishing orders at the plant. Closing of the plant leaves the company with one operating property, Special Fabrics Inc., which will continue the production and converting of book cloth, tag cloth, reproduction cloth and other industrial fabrics in a section of the Saylesville plant. Sayles had previously sold its Biltmore plant, Asheville, N. C., to Dan River Mills and its American bleached good converting operation to Kendall Co. The company also earlier closed its Glenylon print works in Phillipsdale, R. I., and moved its corduroy finishing and some other operations from Saylesville to its Southern plant. Sayles Bleachery was once the largest such plant in New England.

BRUNSWICK, N. C.—Work has begun on an expansion of the National Spinning Co. plant here. The expansion will double the floor space of the year-old plant.

GASTONIA, N. C.—Textiles Inc. reports an increase of 23% in net earnings for the fiscal year ended October 1 and a slight increase in sales. Earnings for the year were $1.2 million on sales of $28.5 in the previous year. Earnings before taxes were $2.9 million as compared with $2.3 in the previous fiscal year. The company reports that sales orders now on the books equal about 12 weeks production, which is about 20% below the corresponding period of last year.

GREENSBORO, N. C.—Cone Mills Corp. has acquired controlling interest in John Wolf Textiles Inc. John Wolf operates two divisions in New York, a decorative and ready-made draperies division and an apparel fabrics division. It also has a subsidiary company in Los Angeles. The Wolf company will continue to operate separately and independently of Cone Mills with its current staff under the direction of John Wolf, president. This move on the part of

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Cone will increase its activities in the converting field and its growth in style fabrics and end-use products.

KINGS MOUNTAIN, N. C. — Slater Bros. Inc. will move its novelty yarn converting operation from Paterson, N. J., to its plant here in January. The company will thereby consolidate its operations. The Kings Mountain plant produces cotton and rayon pile fabrics for upholstery materials. It has approximately 3,000 spindles and 94 looms.

GREENVILLE, S. C. — Cone Mills Corp. will open a branch accounting office here the first of the year with Harold Z. Daniel as manager. Daniel has been assistant to the director of offices and systems department of Cone Mills Finishing Division at Greenville since last April.

NEWTON, N. C. — Carolina Mills Inc., producer of Canton flannel for the glove trade, has installed another 100 44-inch Draper shuttleless looms. This is the second order of 100 shuttleless looms by the plant. Carolina also produces sales yarn.

MOUNT HOLLY, N. C.—American & Efird Mills reports earnings of $329,401 on sales of $20.5 million in the six months ended October 2 as compared with earnings of $302,142 on sales of $23.5 million in the comparable six months of last year.

MOUNT HOLLY, N. C.—Kimberly Yarn Mills Inc. will begin the production of carded yarn in the former Woodlawn Mill building of American & Efird Co. here. Kimberly is a new firm chartered by Patricia M. Baugh and Glenn A. Robinson. American & Efird sold the building to Kimberly after transferring its combed yarn equipment to Albemarle, N. C. It has been reported that the plant will have 8,600 spindles of new Whitin Piedmont Model K spinning.

CHERAW, S. C.—Test runs have begun on the weaving of fiber glass fabric at the new $6 million plant of Burlington Industries here. Although Burlington has not disclosed what the new plant will manufacture, it is reported that ten looms are being operated producing fabrics from fiber glass yarn from Pittsburgh Plate Glass Co.'s new plant at Shelby, N. C., and from Owens-Corning's new plant near Aiken, S. C.

ANDERSON, S. C.—An $870,000 modernization program at the Wellington Mill of West Point Mfg. Co. here is near completion. The modernization includes the construction of a two-story addition to house 120 looms and 26 new spinning frames. The looms will be relocated from the company's existing plant. The new building contains 21,000 square feet of space. The Wellington Plant produces combed lawns, shirting, tracing cloth, airplane cloth and typewriter ribbon fabrics.

DURHAM, N. C.—Erwin Mills Inc. reports net profit of $2.1 million on sales of $63.9 million for the fiscal year ended September 30. This compares with profit of $1.6 million on sales of $70.7 million in fiscal 1959. Profit before taxes was $4.4 million as compared with $3.5 million in 1959.

ALBEMARLE, N. C.—Wiscassett Mills Co. here is constructing a new modern dye plant which is expected to be in operation by next August 1. The 116,500-square-foot addition will be located adjacent to the existing plants.

SMITHFIELD, N. C.—The new Smithfield plant of Fieldcrest was officially opened at a ribbon-cutting ceremony on December 2. The plant will employ about 372 persons in the manufacture of automatic blankets. The weekly payroll will be about $17,000. The plant is to be managed by R. F. Sambleson.

FORT MILL, S. C.—A $2 million expansion underway at the White Plant of Springs Cotton Mills here will result in the addition of 208 looms and 11,280 spindles to the plant's capacity. The 47,000-square-foot addition being constructed at the plant will result in an addition of some 100 employees. Steam requirements will be met by adding a 400-h.p. gas-fired boiler.

LOUISVILLE, GA.—J. P. Stevens & Co. has purchased a tract of land near here, according to John P. Baum, vice-president in charge of manufacturing and operations of Stevens' woolen and worsted division. Baum said that there were no plans for the immediate development of this property. The woolen and worsted division operates two woolen plants in Dublin, Ga., and a worsted plant in Milledgeville, Ga.

LOCKHART, S. C.—A three-floor addition will be constructed at the Monarch Mills plant here at an estimated cost of $250,000. Completion of the new addition is scheduled for May 1, 1961. The building will be of brick, concrete and steel construction. Deering Milliken Service Corp. of Spartanburg is in charge of engineering.

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Textile Industry Schedule

For additional data (reservation requirements, membership requirements, program details, etc.) on activities listed here, contact name(s) shown in parentheses.

Jan. 14 (Sa)—Board meeting, Southern Textile Association, City Club, Charlotte.

Jan. 21 (Sa)—Piedmont Section, American Association of Textile Chemists & Colorists, Poinsett Hotel, Greenville, S. C. (Secretary: Richard E. Rettew, Polymer Southern Inc., P. O. Box 2184, Greenville, S. C.)

Feb. 2-4 (Th-Sa)—Material Handling Short Course, Georgia Tech, Atlanta. (Sponsored by Georgia Tech School of Industrial Engineering and the American Material Handling Society)

Feb. 8 (W)—Annual meeting, American Association For Textile Technology, Hotel Commodore, New York City. (General Chairman: Albert E. Johnson, National Institute of Drycleaning, 101 W. 31st St., New York, N. Y.)

Mar. 16-17 (Th-F)—Textile Engineering Conference, American Society Of Mechanical Engineers, Clemson College, Clemson, S. C. (Chairman: Prof. E. B. Grover, School of Textiles, N. C. State College, Raleigh, N. C.)

Mar. 23-24 (Th-F)—Spring meeting, Textile Quality Control Association, Hotel Charlotte, Charlotte, N. C. (Secretary: Werner Pels, National Cotton Council, 1200 18th St., N.W., Room 502, Ring Bldg., Washington 6, D. C.)

Mar. 23-25 (Th-Sa)—Annual meeting, American Cotton Manufacturers Institute, Fontainebleau Hotel, Miami Beach, Fla. (A.C.M.I., 1501 Johnston Bldg., Charlotte, N. C.)

Apr. 10-13 (M-Th)—30th National Packaging Exposition, Lakefront Exposition Hall, Chicago, Ill. (American Management Assn., 1515 Broadway, New York 36, N. Y.)

Apr. 12-14 (W-F)—Annual meeting, Alabama Textile Manufacturers Association, Buena Vista Hotel, Biloxi, Miss. (Dwight M. Wilhelm, Exec. V-P, A.T.M.A., 125 S. McDonough St., Montgomery 4, Ala.)

Apr. 16-18 (Su-Tu)—Spring meeting, Narrow Fabrics Institute, The Tides Inn, Irvington, Va. (Narrow Fabrics Institute, 11 W. 42nd St., New York 36, N. Y.)

Apr. 18-19 (Tu-W)—Spring meeting, Technical Advisory Committee and Board of Trustees, Institute of Textile Technology, Charlottesville, Va.

Apr. 22 (Sa)—Spring meeting, Georgia Textile Operating Executives, Hightower Building, Georgia Tech, Atlanta. (James L. Taylor, Director, A. French Textile School, Georgia Tech, Atlanta)

Apr. 26-29 (W-Sa)—Annual meeting, Georgia Textile Manufacturers Association, Hollywood Beach, Hollywood, Fla. (T. M. Forbes, Exec. V-P, G.T.M.A., Citizens & Southern National Bank Bldg., Atlanta 3, Ga.)

Apr. 27-28 (Th-F)—Spring meeting, The Fiber Society, Georgia Center for Continuing Education, Athens, Ga. (Sec: Julian Jacobs, P. O. Box 405, Athens, Ga.)

May 6 (Sa)—Spring meeting, Alabama Textile Operating Executives, Thach Auditorium, Auburn University, Auburn, Ala. (Cleveland L. Adams, Auburn University, Auburn, Ala.)

May 10-12 (W-F)—Thirty-first annual North Carolina Statewide Industrial Conference, Jack Tar Hotel, Durham, N. C. (H. S. Baucom, Director, N. C. Industrial Commission, Raleigh, N. C.)

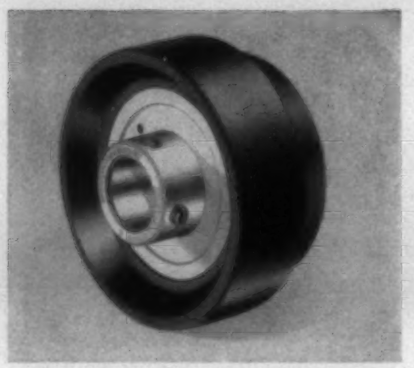
May 15-20 (M-Sa)—National Cotton Week, sponsored by the National Cotton Council.

Oct. 28 (Sa)—Fall meeting, Alabama Textile Operating Executives, Thach Auditorium, Auburn University, Auburn, Ala. (Cleveland L. Adams, Auburn University, Auburn, Ala.)

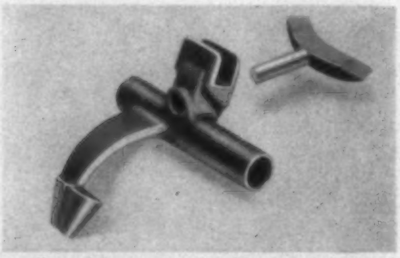
Nov. 8-9 (W-Th)—The Tenth Annual Chemical Finishing Conference, Sheraton Park Hotel, Washington, D. C. (National Cotton Council, 1200 18th St., N.W., Ring Bldg., Room 502, Washington 6, D. C.)

Nov. 13-15 (M-W)—Fall meeting, Narrow Fabrics Institute, Statler-Hilton Hotel, New York City. (Narrow Fabrics Institute, 11 W. 42nd St., New York 36, N. Y.)

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

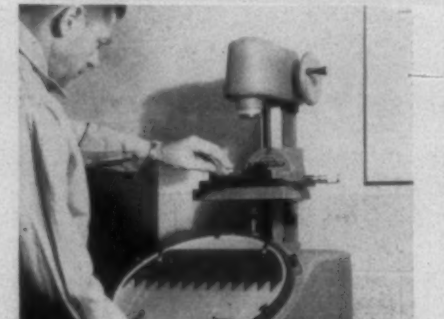


Idler shell on driving roll which contacts the small end of cone on the Model 102. If this shell sticks on the bearing, it will cause hard nosed cones and burned yarns. Therefore, it requires the best in materials and workmanship.



Close delivery thread guide and dog for Foster Model 102. These parts are made from steel forgings which require very accurate and expensive dies. The finish on these parts also plays an important part in their performance.

Profilometer (which measures irregularities in millionths of an inch) used by Foster to test the inside surface of a tube which is part of the Model 102 for processing Textralized* yarn (*trademark of Joseph Bancroft & Sons).



Micro-Projector, an optical testing instrument used by Foster to magnify the silhouette of an object 62½ times and thereby reveal imperfections invisible to the naked eye.

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textile bulletin

Editor . . . . JACK KISSIAH
Associate Editor . . . . JOHN V. LAWING
Assistant Editor . . . . VICTOR EUGENE LOCKEY
Inquiry & Reader Service . . . . . . JACQUELINE BOYLES

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JUNIUS M. SMITH . . . . . . *President and General Manager*
F. R. CAREY . . . . . . *Vice-President and Eastern Manager*
(P. O. Box 10, Warwick, R. I.—Telephone WIlliams 1-3957)
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JAMES W. ROBINSON . . . . *Circulation Manager*
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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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Not Even A Gain

THE textile industry's go at politics during the last six months of 1960 looks even more futile in retrospect than it did close hand. Failures during the period began with attempts to win some voice in the drafting of the campaign platforms at the national conventions of both the Democratic and Republican parties. Spokesmen for the industry, headed by Mac Cheatham, A.C.M.I. president, were given what amounted to cold shoulder treatment by the Democrats at Los Angeles. The Republican platform committee indicated a somewhat more concerned attitude at Chicago, but the sincerity of this interest can't but put to the test inasmuch as the Republican party lost the election.

A more pronounced fizzle was the October meeting prominent industry representatives held with Vice-President Nixon in Charlotte. Although this parley wasn't followed by any formal endorsement of Mr. Nixon, it was generally concluded that the purpose of this brief session with the Republican contender was to offer voter support in exchange for a Nixon reappraisal of the worsening import situation.

Obviously Mr. Nixon didn't make the trip to Charlotte merely to win the votes of the handful of industry representatives that met with him. He was seeking the support of the textile industry, as much of it as he could get. At the time of the meeting he was confident of carrying South Carolina and held high hopes for winning North Carolina. The fact that he didn't carry either state certainly points up the pitiful influence the overly publicized closed door meeting in Charlotte had on the average textile worker at the polls. More importantly to politicians, it demonstrated the industry's failure, if not inability, to deliver organized support.

Still looking for a champion, the industry turned to Governor Luther Hodges' rumored appointment as Secretary of Commerce as a good omen. Even those outside the industry saw the folly of this, as evidenced by the following from the *Greenville* (S. C.) *News.*

Policy On Textiles Was Clear Already

THAT textile leaders are not now elated about Gov. Luther Hodges' attitude toward their import problems should not come as a shock to anyone. His appointment as next Secretary of Commerce brought hopeful judgments that assistance was in sight. Trade circles looked to the North Carolinian as a man who understood the problem and who would take definite action to alleviate the impact of foreign competition. After all, Hodges was once a vice-president of Fieldcrest Mills. Not only that, but President-elect Kennedy's Massachusetts background would indicate a knowledge of and sympathy for the industry.

But then came the revelation from Hodges that the Democratic Administration cannot guarantee any relief. The industry may be over-simplifying its difficulty, he said. "We will be glad to discuss it at any time with textile industry representatives. But we have no guarantees to give," Governor Hodges was quoted in a trade publication.

How does this jive with the pre-election position of Senator Kennedy, whom supporters represented as more receptive to textile pleas than his opponent?

The truth is that there is no inconsistency. Regardless of claims to the contrary, Kennedy didn't say he would do anything about it. It is true that this was the implication which was drawn from a Washington meeting he held with textile representatives. His sympathy was mostly illusionary, however, insofar as actually doing anything is concerned. A month before the election, he made himself pretty clear on the subject. He said that laws presently on the books are adequate. Kennedy added that the Japanese voluntary quota system is working and that this should be continued.

He then suggested that workers who lose their jobs because of foreign competition may have to be trained for other occupations with Federal money. He offered no specific solution to the import problem, nor did he indicate what new employment he had in mind for the trainees.

No, the Hodges statement is not a turn of events. The administration course was already pretty clear.

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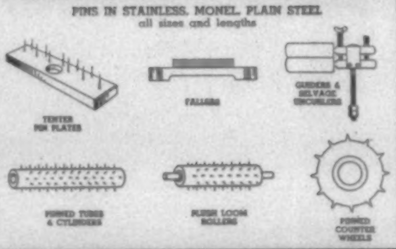

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VOL. 87 JANUARY 1961 NO. 1

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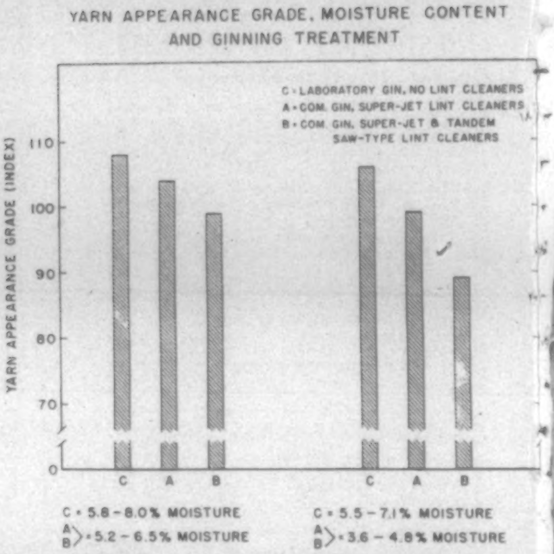

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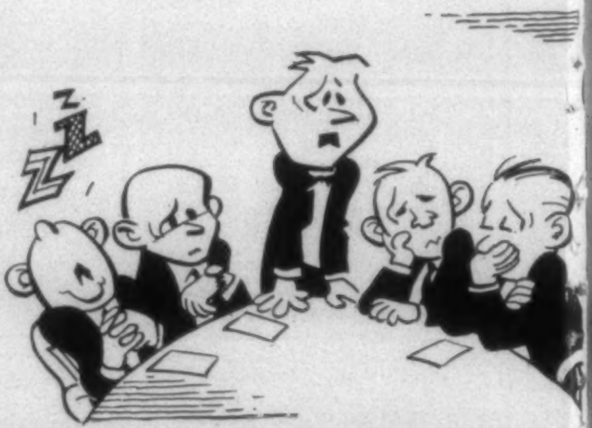

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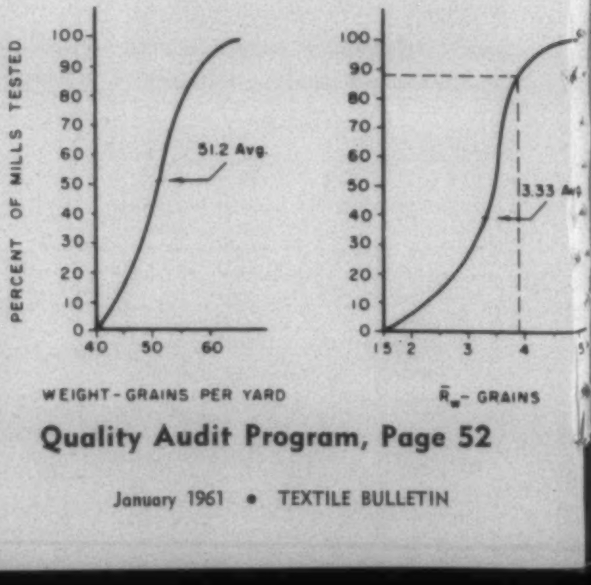

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reduce set marks
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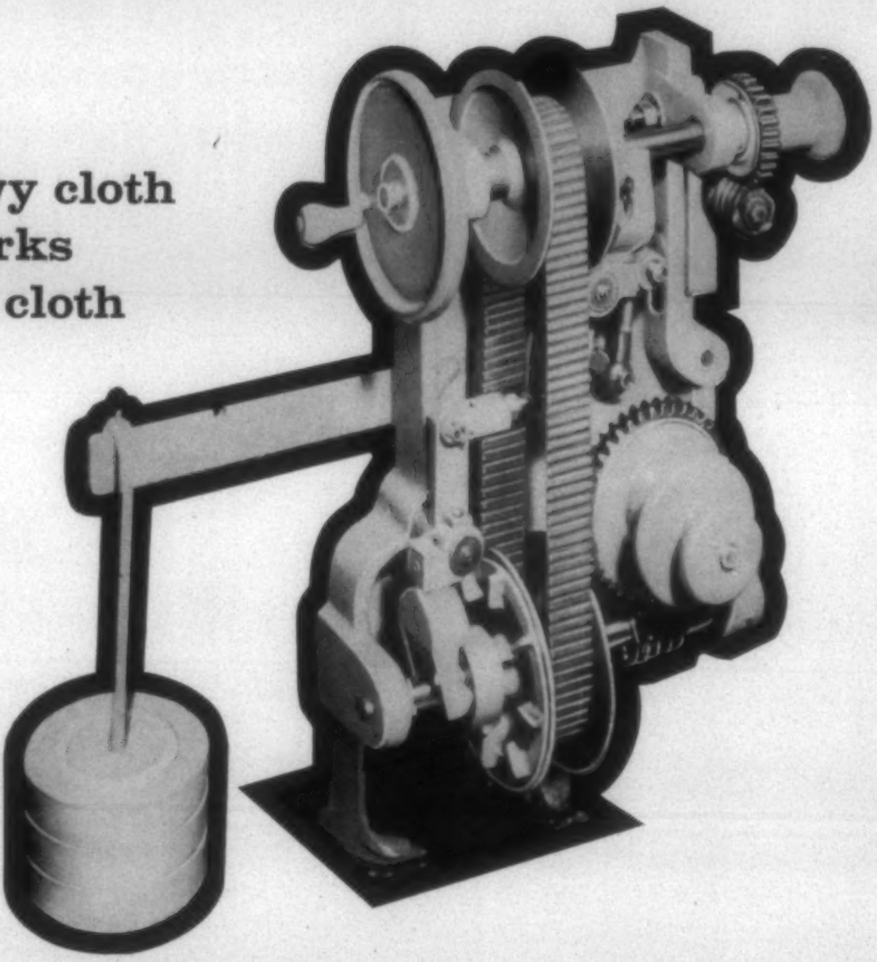

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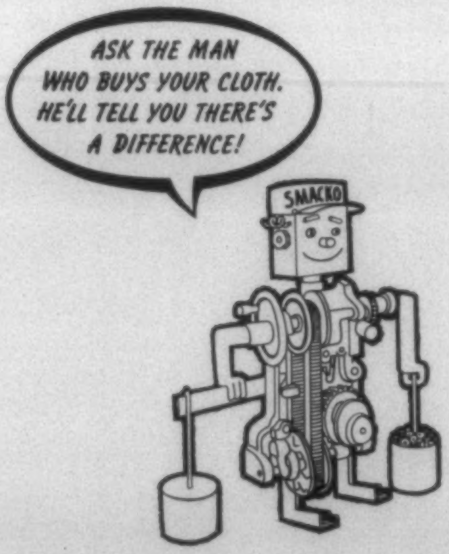
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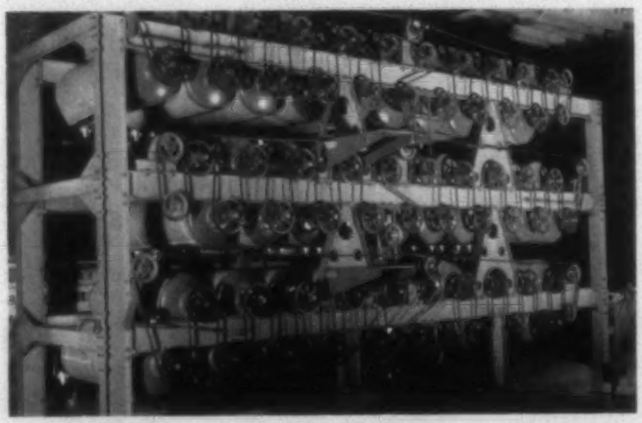

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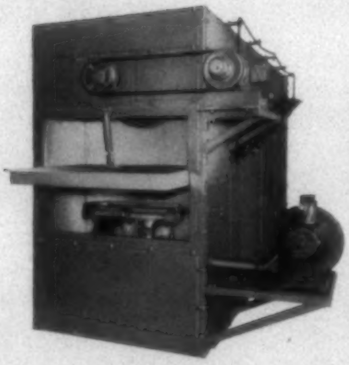

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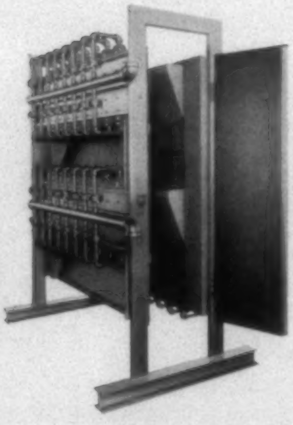

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